THE ARCHITECT & BUILDING NEWS

IN THIS ISSUE

BRITISH ARCHITECTS' CONFERENCE
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JUNE 11, 1953 · VOL. 203 · NO. 24 · ONE SHILLING WEEKLY

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General view of Hatfield-Dunsville County Primary School.

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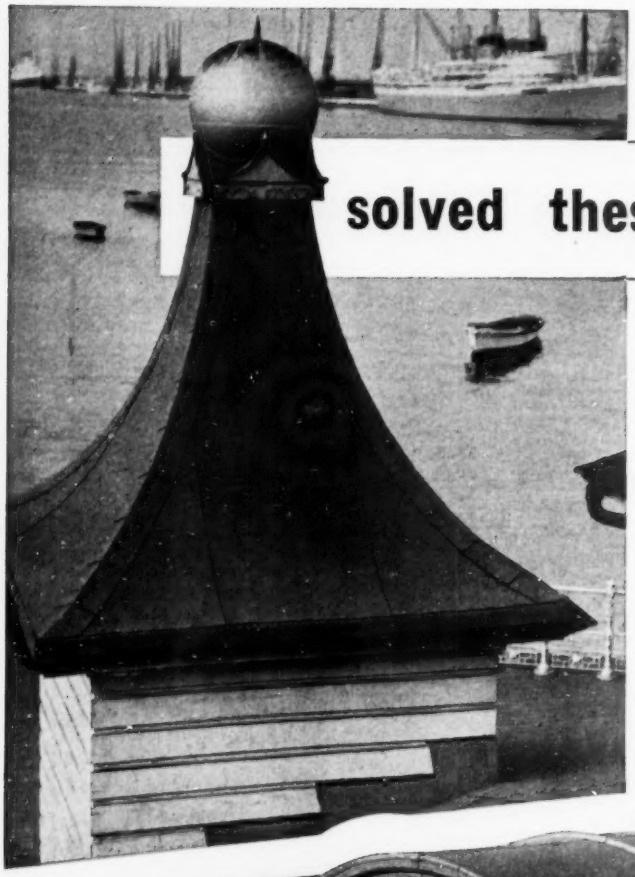

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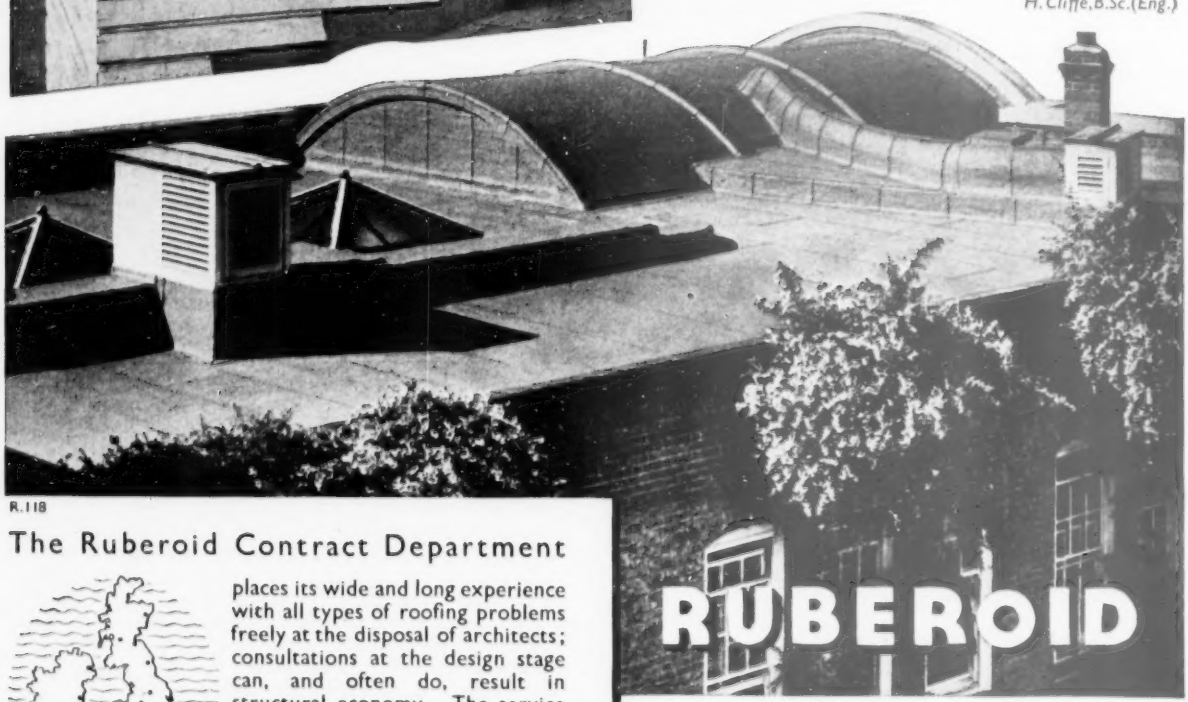

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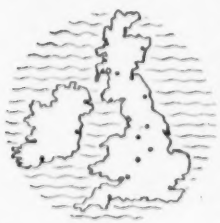

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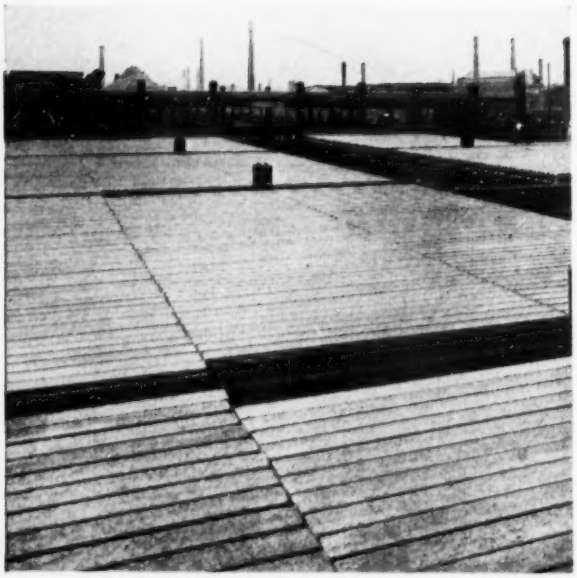

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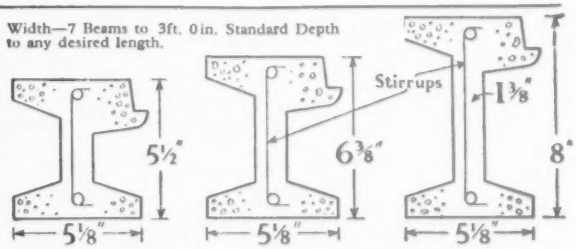

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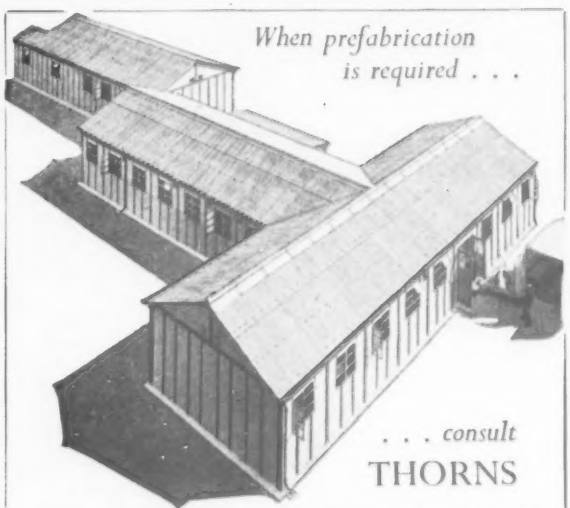

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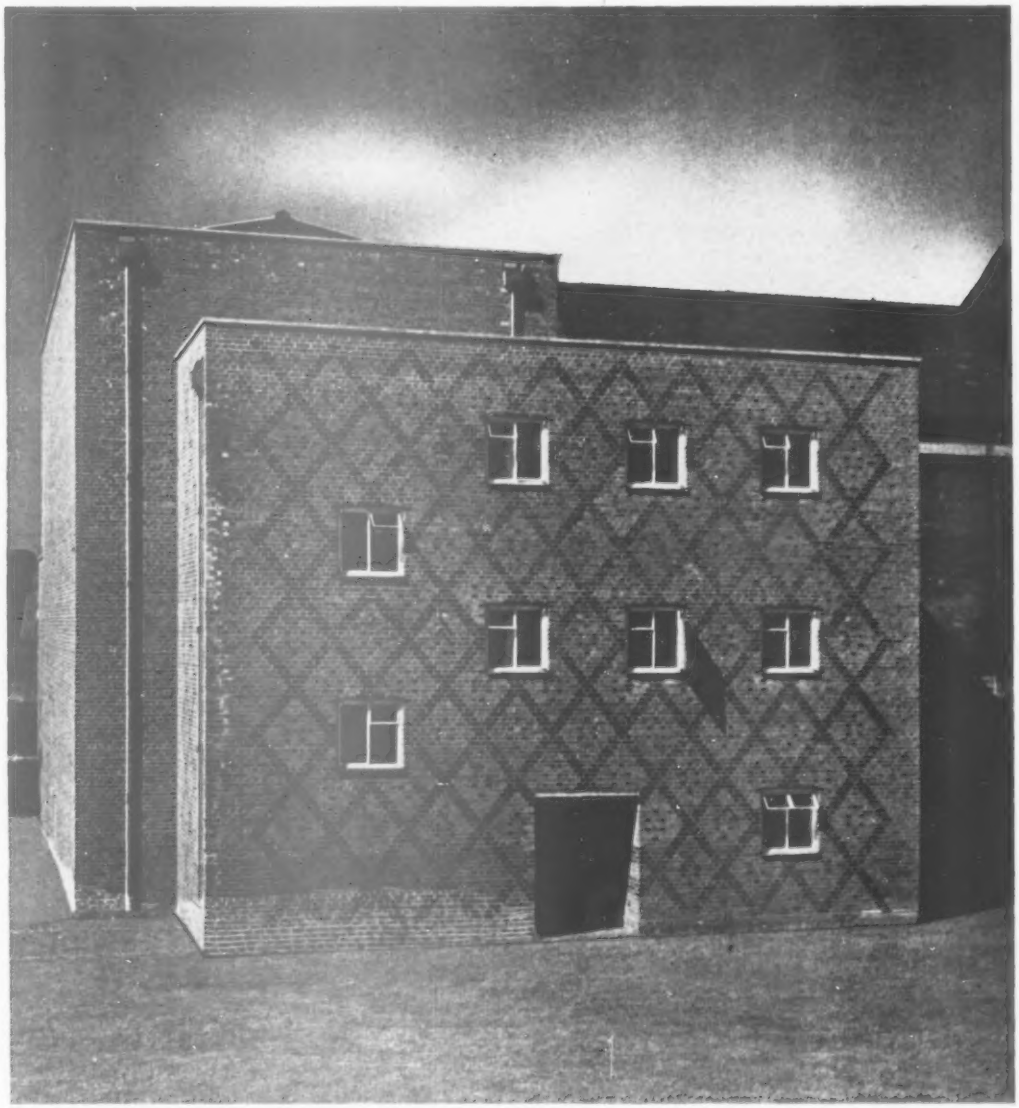

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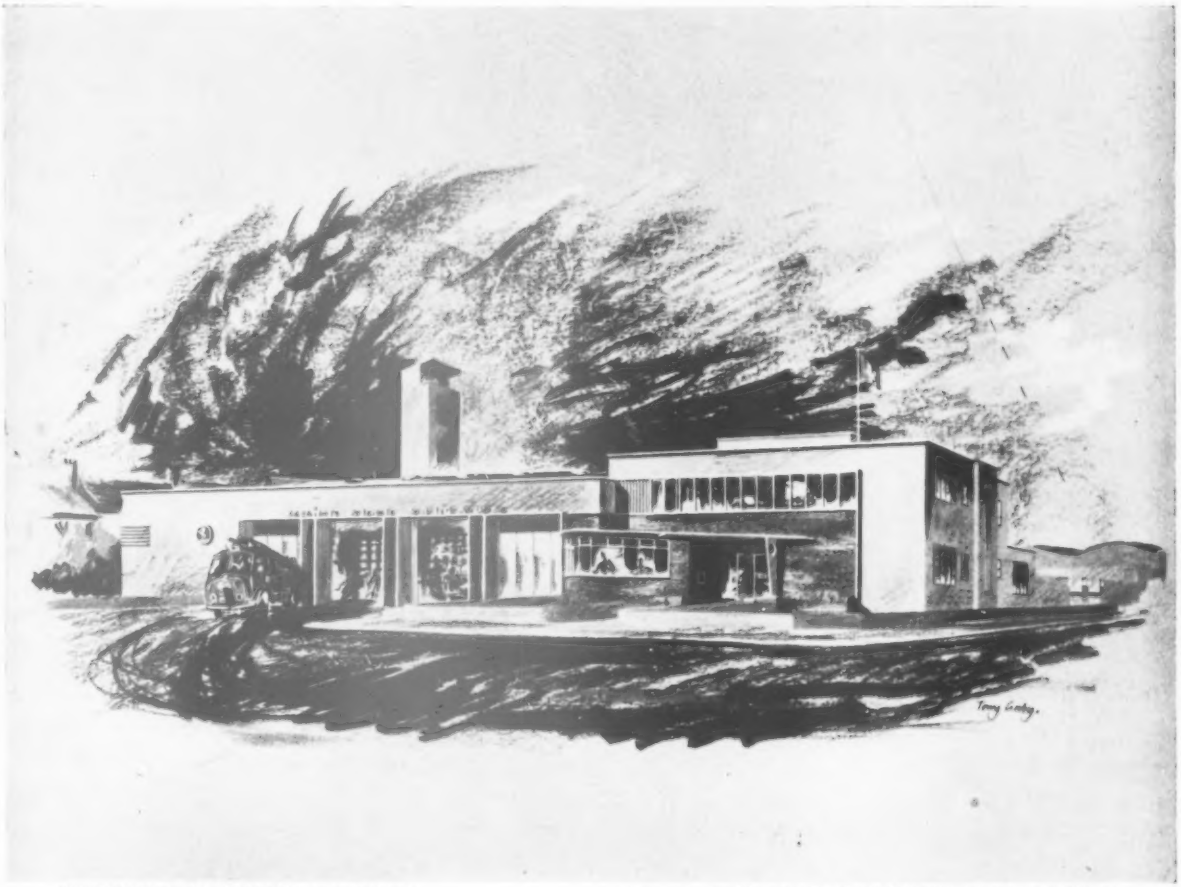

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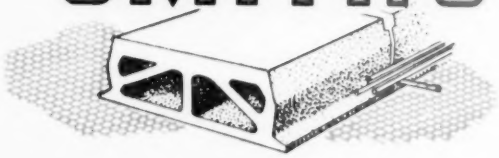

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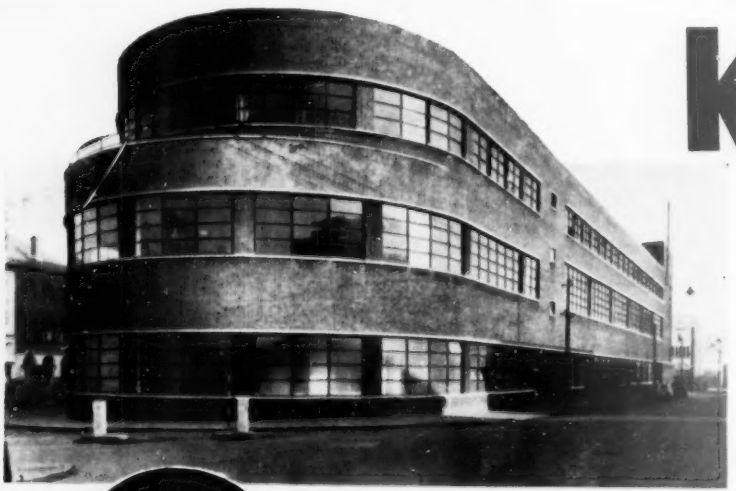

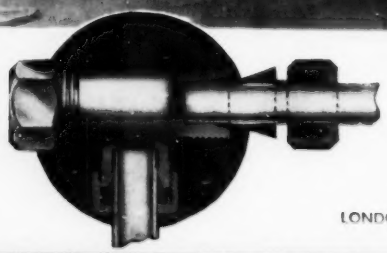

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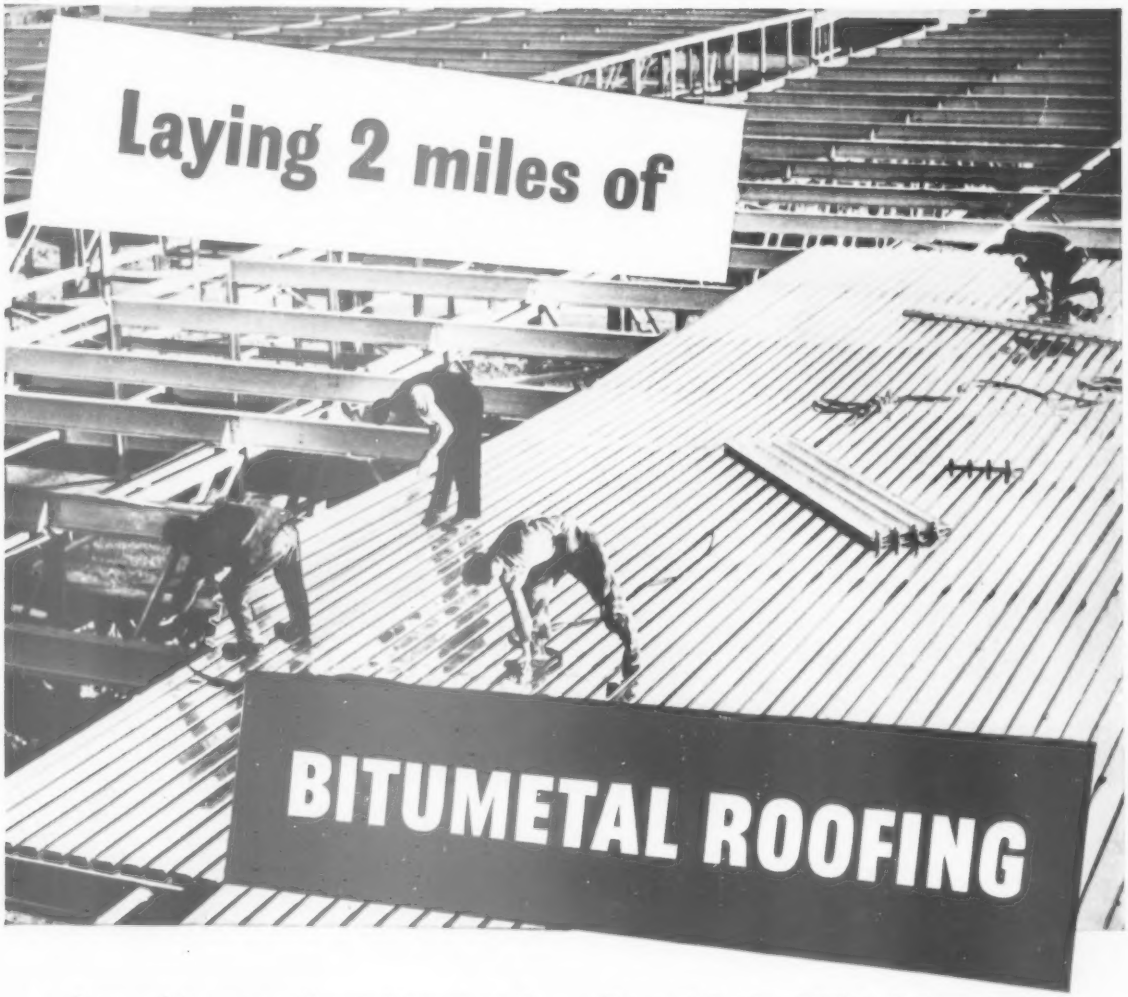

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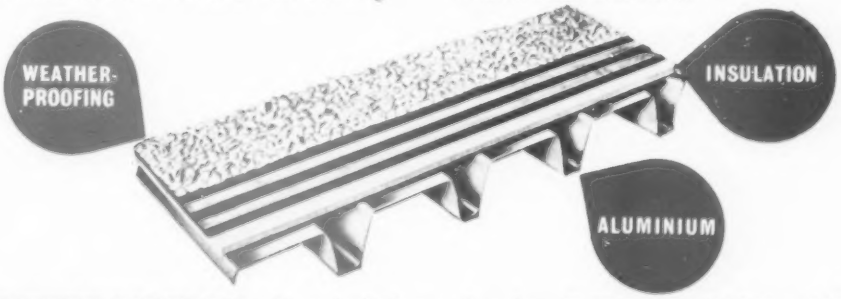

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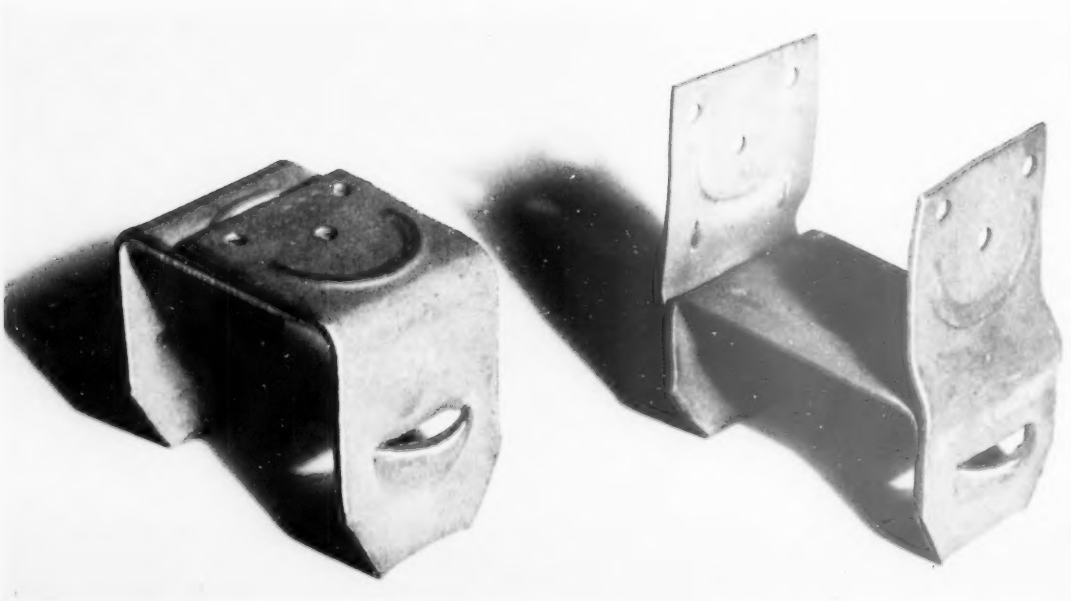

Vol. 203 No. 24

THE ARCHITECT & BUILDING NEWS

June 11, 1953

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CONFERENCE WEEK

THE time of year traditionally associated with early summer sunshine produces the usual spate of conferences. Two, probably those of most interest to the architectural professional, are being held this week. This clashing of dates, whether unavoidable or coincidental, is a source of difficulty for some members of the profession and certainly for the commentator; it may even, we suggest, prove a disadvantage for full attainment of lasting results from the conferences.

The Housing Centre Annual Conference, held in London, perhaps gives those who would attend the Conference at Canterbury, but who cannot afford the time to be away from the Capital, some opportunity to compare notes on at least one building problem. The Housing Centre has taken the view that the time is ripe to survey the whole field; to examine the relationships of new housing, overcrowding, slum clearance and prevention and redevelopment in both town and country. The papers to be read, circulated in advance, appear to cover much of the projected ground and will, we hope, contribute much to what we, in these columns, have always stressed, namely, the necessity to view the new housing programme as but a single facet of a many-sided problem.

The papers to be presented at Canterbury divide themselves naturally, in spite of a general heading, "School Building," into two parts; first, on the particular problems of schools (two papers), viewed chiefly as a central matter of Government co-ordination and research and as a survey of recent progress. The Conference session concerned with this part of the proceedings is, like the London Housing Conference, dealing with special problems and by that token are limited in both interest and probable results. The three papers of the second part, if we may so call it, of the R.I.B.A. Conference, are concerned with matters which have the widest appeal and which are vital to the welfare and future of the architectural profession. In order to allow more time for discussion, copies of the five papers have been circulated in advance and only summaries are to be read; we are therefore able not only to publish extracts from them but to comment upon them in this issue. Doubtless the discussions will be as interesting as the papers; conference discussions often are. But while the discussions on the schools papers are open to the public and the press, those on the relationship of Local Authorities, official and private architects are not and the discussions on the latter may be published only in a limited form. So interesting a subject deserves broader treatment; expression of opinion made during a discussion by individuals binds no one and certainly not the Institute. If they are lively enough, and they may well be, it may be even an impetus to further effort for expansion of professional activities.

There is little doubt that greatest interest will centre on the papers by Mr. S. H. Loweth, County Architect of Kent on "Collaboration between Official and Private Architects" and that by Mr. F. R. S. Yorke on the "The Private Architect's Problems." The former is a "hard-tacks" description of a method of getting things done through improvization and organization of collaboration; an insistence on the use of all available opportunities for mutual aid in the execution of urgent and immediate problems in efficient ways. Judging by the results of the policy adopted in Mr. Loweth's area and the support given there to the private architect as a part of the whole set-up, the system has everything to commend it. It becomes, however, evident by the very same signs that the qualities of thought and ideas of both local authority and its chief professional officers are the major influences which determine whether narrow or broad decisions are taken, whether the work of building schools, houses or other communal buildings remains within the walls of official offices or is dispersed through wider fields, where greater experience and knowledge may be tapped for the advantage of the community in general.

Mr. Loweth's ideas, worked out over years of practical experiment, will commend themselves to the private architect; their appeal to the official architect will depend on the latter's professional and

administrative abilities. Mr. Loweth, on some points, puts his colleagues " on the spot."

Mr. Yorke's review of the many difficulties of running a busy private practice is a good one. It fits into much that Mr. Loweth has to say, but may be used by some either as ammunition for the support of large official offices or for an attack upon them. Mr. Yorke has a lot to say about partnerships and the economic and technical organization of larger offices, and goes to some pains to suggest that the time has come for architects to consider the extension of the system of limited liability companies (or unlimited, if this has any advantage over present methods) into the professional field. The balance of advantage is doubtful; while there is much that can be said for such formal organizations on the purely administrative and financial sides, the general tendency for size and big business to become fashionable may well militate against fine architectural design and provide encouragement for official bigness by the flattery of support. It is a thorny subject; how much would we gain if the full discussion on it could be published? Or would it all cancel out?

" The terrace outside the Henry Florence Hall had been prettily arranged as a garden "

EVENTS AND COMMENTS

THE SEASON OF THE YEAR

I have never done a London season; in fact, I have never needed more than one white waistcoat even in these days of slow laundry returns. All the same, the rush and excitement of the last week or so has left me a little breathless and more than a little confused. It becomes increasingly difficult to separate Mr. Anthony Hippisley-Coxe, speaking at the A.A. on Coronation Charivari—when, amid unusual jollification, coronation souvenirs were distributed to some members and guests—from the R.I.B.A. reception, where if the crowd seemed less thick than usual the spirits were higher. To have blistered one's back by the sea at Whitsun and nearly died of cold, wet, and exposure on Coronation day a week later only serves to heighten the colour of a glorious ten days. The R.I.B.A. reception was much as usual, although in the more public parts of the building ambassadorial glitter was not quite so apparent as it once was. The terrace outside the Henry Florence Hall had been prettily arranged as a garden, but unfortunately the weather was not warm enough to encourage one to linger there. The film show was well worth seeing. One of the films, consisting of coloured squiggles with violin accompaniment, took me back many years to a post office advertising film by, I think, John Grierson, and called the Colour Box. The show ended with the trooping of the colour. Quite the right note for the Friday before the Coronation. It would be hard to find more welcoming hosts than Mr. and Mrs. Howard Robertson and, judging by the queue of persons waiting to be received when I arrived, everyone was anxious not to be too late for the reception. Once again I failed to penetrate to the library, and agents tell me that I missed some interesting and curious drawings illustrating the Royal Patronage.

CORONATION DAY

Like a reporter in one of the popular dailies, I saw the Coronation the hard way. My daughter was the thirty-three-thousandth child on the Embankment. "We cheered everything," she said, "and when there was nothing to cheer we just cheered." The rest of us rose at three, and by the greatest good fortune found a taxi which took us to Hyde Park Corner. An overnight reconnaissance had convinced me that the East Carriage Drive was, as ever, the best place from which to see. We were in position by four and there we stuck except that we were able to go for short walks and to sit down in turn on a

small stool which the police did not notice. Twelve hours is a very long time to stand in one place. People are inclined to ask, "What did you do all the time?" I really cannot remember. We did not talk much; my younger son scarcely spoke a word the whole day, his eyes being glued to the ever-changing scene. We read papers a little and watched the stands fill, or listened to the talk going on all round us. We ate a good deal in small doses, and when the rain came we just got wet. No one was the less cheerful for it. Being opposite some Government stands we were kindly supplied with loud speakers. The B.B.C. provided early morning music, and later a "military commentator" told us about the troops on parade. At five-thirty I nearly had a bout of fisticuffs with a Commonwealth sailor who appeared to have been a little premature in splicing the mainbrace. We heard the broadcast commentary on the procession to the Abbey, but that was after we had heard the news about Everest. The announcement was received with great satisfaction by the crowd but without cheers, although everyone, or nearly everyone, listened to a broadcast on the difficulties of climbing at high altitude which was given later. We heard several news bulletins, and with particular pleasure one which described the crowds in the east carriageway as being ten deep. A count proved that they were at least fifteen deep. Various dustmen and other important people were cheered. In fact, we were wet but happy.

We heard the service from the Abbey perfectly, and the only blemish was when, at the critical moment before the Recognition, some idiot found it necessary to cut in with a quite unimportant announcement about a found child. The Crowning, dramatic as it was from the description so admirably given by Howard Marshall, with the sounding of the trumpets and the cheers of the congregation, was made even more dramatic by the firing of a salute by the King's Troop not three hundred yards away. The first shot coming immediately after Howard Marshall had said, ". . . and the Queen is . . . crowned." This incident took everyone straight into the Abbey congregation.

We were just in front of the head of the procession and could see the leading horsemen when they formed up. There was a great cheer when the band struck up, and from then on all wetness or tiredness was forgotten. You will have seen all the pictures and probably a film, too, so that I need not attempt to describe the uniforms or the fine bearing of the troops and armed police from all parts of the Commonwealth. It was good to see, too, that the new number one dress of the army had not entirely done away with variety in uniform. All we need now is to see more of it about. The gaiety of the streets of London has been greatly added to by the smartly dressed soldiery. As each contingent was described by our military commentator a welcoming cheer went up, and these were no half-hearted, shy hurrahs but "loud and continuous cheers." When the carriages began to appear the cheers grew even louder as old favourites were recognized. I need hardly mention the Queen of Tonga for you have doubtless heard of her right royal reception and the wonderful way in which she responded. As the State coach approached the cheering and waving redoubled and being an emotional person, and I noticed that large numbers of others felt the same, I found some difficulty in seeing into it. But there was the Færy Queen, more beautiful than one could have imagined, wonderfully regal and obviously immensely happy. Realizing that we were very wet indeed and perhaps a little cold, too, we quickly walked to a kind friend's house and dried our clothes, rested, ate enormously, and were then ready for the evening's expedition to the fireworks. These we watched from Vauxhall Bridge and if at that distance they did not completely fill the sky, they made a brave attempt at it. I was sorry that I had no programme with me for I am sure that my enjoyment would have been heightened by knowing that number 14 was a salvo of 24 large shells—a Field of golden wheat and poppies changing to an aerial bed of anemones; or that number 78 was the Satanic thunderbolts creating an Astronomical Bombardment. Surely the inventors of these titles are only slightly less ingenious than the inventors of the fireworks themselves.

After this the eating and drinking were resumed and then the family, a little fatigued by being on its feet for the best part of 22 hours, went home to bed.

THE CORONATION AND BIRTHDAY HONOURS

A list of those connected with architecture and the arts is given below. Congratulations one and all, with a special cheer for David Eccles for being a fine organizer and an ideal client, not to mention patron. A special cheer, too, for Eric Bedford, whose Mall decorations are excellent by day and night, and that is only to mention a small part of his fine work for the Coronation. Alfred Bossom, never far from the architectural news and right in it now with the Modular Society, earns a cheer, too. Among those to whom we are normally accustomed to remove our headdress when passing in the street, we observe with pleasure that Maxwell Fry, Osbert Lancaster, Nikolaus Pevsner, Michael Waterhouse and Geoffrey Webb have been made C.B.E.s.

ABNER

Coronation and Birthday Honours

Baronet.—Alfred Charles Bossom, M.P., F.R.I.B.A.

K.C.V.O.—The Rt. Hon. David Eccles, M.P., Minister of Works; Sir Harold Emmerson, K.C.B., Permanent Secretary, Ministry of Works.

C.V.O.—Eric Bedford, A.R.I.B.A., Chief Architect, Ministry of Works.

K.B.E.—Sir Charles Johns Mole, M.V.O., O.B.E., F.R.I.B.A., Director-General of Works, Ministry of Works.

C.B.E.—Edwin Maxwell Fry, F.R.I.B.A.; James Edgar Hurst, President, British Cast Iron Research Association; Osbert Lancaster, Hon. A.R.I.B.A.; Joseph Rawlinson, Chief Engineer, London County Council; Nikolaus Bernard Leon Pevsner, Hon. A.R.I.B.A., Professor of Fine Art, University of Cambridge; Michael Theodore Waterhouse, M.C., P.P.R.I.B.A.; Geoffrey Fairbank Webb, Hon. A.R.I.B.A., Secretary, Royal Commission on Historical Monuments (England); Arthur Thomas Worboys, Chairman, London Brick Co., Ltd.; James Cyril Townsley, Chairman, Dawber, Townsley & Co., Ltd.

O.B.E.—Brian Basil Philip Barker, Chief Information Officer, Ministry of Works; Arthur Willoughby Hope Brown, Dist. T.P., F.R.I.C.S., M.T.P.I., L.R.I.B.A., Deputy Chief Inspector (Planning), Ministry of Housing and Local Govt.; Walter William Chapman, A.R.I.B.A., Architect, Ministry of Education; G. H. A. Hughes, Director, London Master Builders' Association; Clifford Edmund Mee, A.R.I.B.A., Assistant Chief Architect, Ministry of Works; James Arthur Woodford, R.A., Sculptor.

M.B.E.—William Sandy Bryant, A.R.I.B.A., Senior Assistant Architect,

Ministry of Works; Samuel James Garton, Chief Investigator, Historic Buildings, Ministry of Housing and Local Government; George Groves, Manager, Clipsham Stone Quarries, Oakham; Charles Thomas Webster, Senior Experimental Officer, Joint Fire Research Organization, D.S.I.R.

B.E.M.—Robert William Spears Rigg, Leading Architectural Assistant, War Office, Salisbury Plain; Wilfred Arthur Tanner, General Foreman, Richard Costain, Ltd.

C.M.G. (Australia).— Arthur George Stephensen, F.R.I.B.A., A.M.T.P.I.

The Officers and Council of the Architectural Association for the Session June 1, 1953—May 31, 1954

President: Sir Hugh Casson, R.D.I., M.A. (Cantab.), F.R.I.B.A.; *Vice-presidents:* Peter Shepheard, B.Arch. (L'pool), A.M.T.P.I., A.I.L.A., A.R.I.B.A.; Bryan Westwood, F.R.I.B.A., A.A.Dipl. (Hons.); *Hon. Secretary:* Gontran Goulden, T.D., A.R.I.B.A.; *Hon. Treasurer:* D. Clarke Hall, F.R.I.B.A., A.A.Dipl.; *Hon. Editor:* W. W. Atkinson, O.B.E., A.R.I.B.A., A.A.Dipl. (Hons.); *Hon. Librarian:* Miss Barbara Price, M.A. (Cantab.), A.R.I.B.A., A.A.Dipl.; *Ordinary Members of Council:* B. L. Adams, A.R.I.B.A., A.A.Dipl. (Hons.); A. R. F. Anderson, F.R.I.B.A. (Past President); John Brandon-Jones, A.R.I.B.A., A.A.Dipl.; H. T. Cadbury-Brown, F.R.I.B.A., A.A.Dipl. (Hons.); Neville Conder, M.S.I.A., A.R.I.B.A., A.A.Dipl. (Hons.); Oliver J. Cox, A.R.I.B.A., A.A.Dipl. (Hons.); Hon. R. A. de Yarburgh-Bateson, M.A., A.R.I.B.A., A.A.Dipl.; Alexander Gibson, F.R.I.B.A., A.A.Dipl. (Hons.); Edward Playne, D.S.C., F.R.I.B.A., A.A.Dipl.; Graeme Shankland, M.A. (Cantab.), A.M.T.P.I., A.R.I.B.A., A.A.Dipl.; Prof. Basil Ward, Hon. A.R.C.A., F.R.I.B.A.

The Modular Society

Mr. C. H. Aslin, C.B.E., F.R.I.B.A., County Architect, Hertfordshire, invites fellow members of the Modular Society to visit Summerswood School, Furzehill Road, Borehamwood, designed on a 40in grid, on Thursday, June 18, 1953, at 8 p.m. Members of the architectural staff will attend to give short talks on the advantages and disadvantages of the 40in grid, the design of four-way junctions, tolerances and lessons learnt. Routes to the school: (1) *By car.* A.1, Barnet by-pass to Sterling Corner caravan site, turn left for ¼ mile, fork right down Furzehill Road, pass Home for Retired Horses ½ mile. The school is on the right. (2) *By 'bus.* Route 712 or 713. 6.26 Marble Arch—Borehamwood 7.9. (3) *By train.* St. Pancras 7.20—Elstree 7.51 (15 minutes walk).

KINGS SCHOOL SHOP, CANTERBURY

Photo: George Mansell

HOWARD ROBERTSON
PRESIDENT, R.I.B.A.

SYDNEY H. LOWETH
KENT COUNTY ARCHITECT

R. W. PAINE
PRESIDENT, S.E. SOCIETY OF ARCHITECTS

L. HUGH WILSON
CITY ARCHITECT, CANTERBURY

BRITISH ARCHITECTS' CONFERENCE

a survey of planning proposals and post-war building trends in Canterbury and East Kent

IN the following paragraphs is sketched a brief outline of planning proposals in the East Kent Area based on material from the County Development Plan prepared under the direction of James W. R. Adams, O.B.E., P.P.T.P.I., F.R.G S., F.I.L.A., County Planning Officer, and from material on the Canterbury proposals supplied by L. Hugh Wilson, O.B.E., A.R.I.B.A., A.M.T.P.I., City Architect of Canterbury.

A note on Industry in Thanet written by W. Leslie Armstrong, B.Sc., A.M.I.C.E., M.Inst.Mun.E., A.M.T.P.I., Borough Engineer and Surveyor, Margate, commences on page 679 *and is concluded on page* 696 *which is followed immediately by a map of Canterbury and papers to be read during the British Architects' Conference. Between pages* 680 *and* 695 *are pictures and descriptions of a selection of post-war buildings in Canterbury and East Kent.*

KENT has been called the Garden of England; certainly there is no countryside more beautiful near the Metropolis than its blossoming orchards in early spring or its hop fields in late summer. It is not surprising, therefore, that the basic policy governing the County Development Plan submitted to the Minister last year has been the maintenance of agriculture as the major industry of the County even if this meant limiting the expansion of developed areas. The County Council have, however, accepted and endeavoured to implement the policy of the Greater London Plan, 1944, and its subsequent amendments in relation to that part of Kent directly affected by it. The County Plan also seeks to provide for the healthy growth of towns and large villages where this appears desirable to balance their economy or to provide additional population to support adequate service facilities, etc., but not at the expense of good agricultural land where it was at all possible.

Maidstone

Maidstone is the County Town and comes into the area under review. The town plan has not yet finally been decided but no provision is made for any general expansion either industrially or otherwise, apart from the natural increase in the town and its immediate vicinity. The number of houses has increased enormously post-war on the largest estate at Shepway. One thousand three hundred and eight houses have been completed and 82 more dwelling units are under construction.

Canterbury

Canterbury, which, with Folkestone, forms the Centre for the British Architects Conference now taking place, suffered great damage by bombing in 1942 during one of the "Baedeker" raids when about one-third of the main shopping area lying South of the Cathedral was destroyed, including 111 houses, 78 shops, 5 churches and 48 other buildings.

The existing main road pattern of Canterbury, evolved over the centuries, consists of a number of radial roads converging on the centre of the City, which retains the narrow winding streets pattern of the old medieval City. The Development Plan, submitted to the Minister in 1951, incorporates a ring road encircling the Central area with radial roads linking it with the major traffic routes in the surrounding County area. The ring road makes use of the existing road pattern and follows closely the City Walls, which will be exposed for their whole length.

The blitzed area is included in the Development Plan as an area of Comprehensive Development, of which St. George's Street is the first section to be redeveloped.

St. George's Street before the damage consisted of crowded together buildings with very poor conditions of light and air. The area has been replanned with service roads to give access to the rear of all shops, and with car parks provided in the centre of each block. A market square has been planned at one end of the area giving an impressive view of the Cathedral rising above the roofs of the buildings in Burgate.

All new buildings designed for St. George's Street are based on a scheme, approved by the Royal Fine Arts Commission, which lays down the main lines of development as regards the forms, mass and scale of the new buildings and the materials to be used.

The buildings are in two main groups—on the North-East side of St. George's Street are the larger blocks with individual treatment, with interest in form, colour and texture. On this side, also, are two open spaces—the Market Square at the North-West end and the garden around St. George's Tower at the South-East end. On the South-West side of the street the majority of the shops are small standard 20ft Units and a quieter treatment is used to act as a foil to the other side. A colonnade is being provided to produce a coherent street picture out of the many small units.

So far, 11 shops have been completed and three shops and a printing works are under construction. Work should start this year on six further blocks, comprising two banks and 12 shops. It is also hoped that in the near future work will be commenced on the new bus station. (Photographs page 695.)

Canterbury City Council has given high priority to housing and taken the lead over all City and County Boroughs in the number of houses provided in relation to population. The total number of post-war houses completed is 1,220; while 178 are under construction. The majority of houses are traditionally constructed in brick. Of non-traditional houses 200 B.I.S.F. steel houses and 74 Aluminium Houses have been erected and 400 temporary bungalows. The main housing development has taken place on five sites, for the most part on the perimeter of the City. Four of the sites are complete and the main work is now concentrated on the development of the London Road site illustrated on page 680. A site at St. Stephens is being planned for approximately 350 houses on the Radburn principles of layout.

The post-war school programme includes three schools erected and occupied, namely, Simon Langton Grammar School for Girls, where the British Architects Conference dinner will be held; Reed Avenue Primary School; and St. Stephen's Primary School. Plans are now being prepared for a secondary modern school at London Road Estate.

From the point of view of Industry, the City Council have decided to erect and let a small factory building on land acquired in the light industrial area; a new Cattle Market is planned.

Folkestone

The general policy on which the plan for Folkestone and Hythe is based envisages that they should retain their present character as seaside resorts which includes, particularly in the case of Hythe, a large residential element which it is intended should be maintained.

Provision is made for the introduction of some further light industry to offset the unbalance of population and the tendency of winter unemployment. At present a total area of 47 acres of land in the two towns is occupied by industry; the Development Plan will increase this area to 80 acres.

The Plan provides for a civilian population of at least 57,500 persons in the two Boroughs excluding service personnel, but its policy is to restrict the spread of urban development and to retain the maximum area of land in agricultural use.

Provision is made in the Plan for future Hospital development and the implementation of the greater part of the Education Development Plan. Sites at West Hythe and Capel are proposed to be retained as caravan camping sites but no new proposals are made. One of the most interesting post-war buildings of the Education Programme are the new workshops to Folkestone Technical College, illustrated on page 688.

Dover

This town is largely commercial and it is intended to expand its present functions as a port and industrial centre, retaining its garrison and residential status as an important subsidiary. The Development Plan will accommodate a population of at least 40,000 persons within the Borough and nearly 6,000 in the adjoining rural district.

Dover suffered from enemy action by bombing during the latter part of the war, and its temporary housing estate at Buckland Valley is one of the best known in the country.

An architectural competition for flats on a site in Marine Parade is under way; Mr. Arthur Kenyon is the assessor.

Land allocation for industrial use is to be increased by transference of industry to land in the centre of the town, now derelict. Important industrial works under development include the completion of the Car Ferry Terminal, Eastern Dockyard, which is to be opened on June 30, and the new factory in Granville Road of the London Fancy Box Company, which will be reviewed in a future issue of the *A. & B. N.*

Medway Towns

No large expansion of the City of Rochester or the Boroughs of Chatham and Gillingham and the surrounding area is envisaged in the County Plan, for the following three reasons: 1, The agricultural value and topography of the land, which is hilly; 2, the internal needs of the towns themselves; 3, the proposed Medway Towns by-pass which will divert traffic which now passes through to Thanet and the East Kent Seaboard. Rochester and Chatham each has 300 acres reserved land for housing, Gillingham has approximately 1,180 acres for further residential develop-

PROPOSED SHOP IN CANTERBURY. ARCHITECTS: R. W. PAINE & PARTNERS.

ment, mainly in the Twydall Lane-Maidstone Road, Rainham and Wigmore areas, whilst in the adjacent parts of the Strood, Malling and Hollingbourne Rural Districts approximately 370 acres is reserved for residential development. Provision is made in the Plan to increase the amount of land for industry, up to a total of 430 acres largely in the Chatham and Gillingham areas. Soon after the war Short Brothers, Ltd., moved from Rochester to Belfast and left a hole in local industry which has since been largely filled by a number of small thriving firms.

Ashford

This town has been selected for expansion by the decentralization of population and industry from London. The present population of 24,000 is likely to be increased to approximately 50,000, including closely related villages. It is envisaged that the town will develop industrially with its important subsidiary characteristics of an agricultural market centre.

Thanet

Ramsgate, Margate and Broadstairs and the surrounding country are not likely to change their present characteristics according to the Development Plan, which provides for a population of some 105,000 persons. Existing caravan and camping sites at Court Mount and Canterbury Road, Margate, and elsewhere are to continue on a permanent basis.

The Thanet towns taken together are large enough to support all normal urban facilities and amenities and additional and varied industries are required to provide adequate employment at all seasons of the year. In this connection provision is made for an increase in the amount of land for industry from about 61 acres to about 143 acres, and the greater part of this land is on several sites grouped at Westwood where industrial development has and is now taking place.

Industry in Margate by the Borough Surveyor

The idea of an old-established and very popular holiday resort having industrial ambitions also may even now be considered unusual, but without some variety and stability of occupation, such a town is a one-industry town and known by all students of economics to be highly unsatisfactory and intensely vulnerable to trade cycles and changes.

Prior to the War of 1939-1945, Margate may be said to have enjoyed reasonable though variable prosperity in its primary trade of catering for the period and day visitor, and industrial development was entirely confined to production for this trade and other local trades such as building.

As Planning Officer to the Corporation the writer was even then somewhat doubtful as to the soundness of the position, but a very few proposals for industry came to nothing. During the later years of the war he became extremely critical of the then current theories that we were about to enter upon, if not a new heaven, certainly a new earth.

A proposal was therefore put forward to the Margate Town Council that they should take definite steps to encourage industry to come to the town, and the writer put forward the following considerations to the Council:

1. That the town had an unbalanced economy.
2. That there was a regular winter unemployment roll of about 1,200 or 1,300.
3. That there were very few openings for young people in either trades outside building and catering, or professions.
4. That there was a reserve of suitable labour ready to accept all the year round employment at reasonable rates instead of casual season work at perhaps temporary higher rates.
5. That industry in which the product is valuable for its bulk and/or where labour costs are high proportionally to the materials cost, could find a suitable location even at this distance from a distributing centre or materials source.

The Council accepted the above five propositions and the writer then proposed the purchase of a small industrial estate to provide employment for about 2,500 persons.

It must be appreciated that the object of this venture was definitely *not* to increase the size or population of the town, but to absorb the believed available labour resources.

Our two neighbours, Ramsgate and Broadstairs, were invited to share in the project, but while they were interested, they were sceptical about propositions 4 and 5, and were not prepared to undertake any financial responsibility, and Margate Council decided to go ahead on their own venture and secured a site of 27 acres for this purpose.

The site selected is close on the junction of the boundaries of the three towns, as Margate took the view that the project should be regarded as one for Thanet generally, and that it should be accessible from the three towns, which have a total population of about 95,000.

The costs of development were considerable as the site, being on the boundaries, was not sewered, and about £14,000 has been spent on the development of roads and sewers on the site, and £19,000 on a 42in-24in main sewer extension about one mile in length.

Negotiations were taken up with a large number of firms, but two deterrent factors probably prevented some at least of these from coming to fruition:

(a) Many of the applicants wanted the Council to build and rent the factories; and

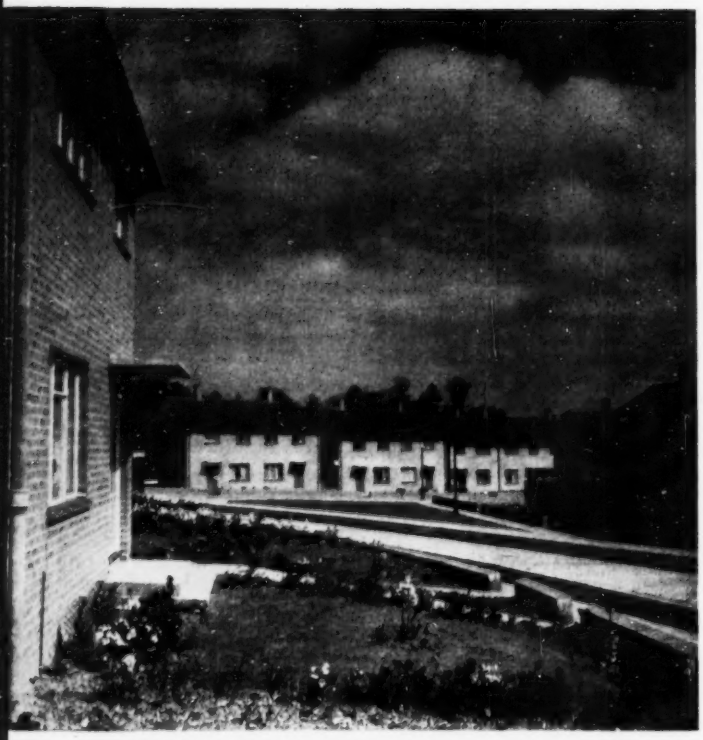
(b) the land was to be leased and not sold, that then being the policy of the Ministry of Town and Country Planning—and, indeed, laid down in the Town and Country Planning Act under which the land was purchased and developed.

In 1950 successful negotiations were concluded with the Klinger Manufacturing Company, hosiery makers of Edmonton, who found their existing site insufficient for their needs, and decided to open additional works in Margate.

This firm established training schools for operatives in Margate, and the first instalment of their new factory is

(Continued on page 696)

HOUSING AT ASHFORD. ARCHITECTS: BRADDOCK & MARTIN-SMITH.



LONDON ROAD HOUSING, CANTERBURY

Housing

THE London Road Housing Site, Canterbury, by the City Architect, L. Hugh Wilson and his staff is situated just outside the town on the main road to Faversham and London. The site, of which a view is shown above, will ultimately provide approximately 700 houses. This total accommodation will be mainly in two- and three-bedroom houses, with a small proportion of four-bedroom houses, one- and two-bedroom flats and old people's bungalows. Experimental houses to plans of the Ministry of Housing & Local Government have also been erected at the request of the Ministry and include four of the Open-Plan Type. The general contractors are: K. A. Hawkes, Ltd., D. C. Heard & Co., Ltd., G. Lewis & Sons, Ltd., Ringmer Building Works, Ltd.

On a separate section of the site a compact layout is planned for 86 houses (two- and three-bedroom types) which will be built by the Council and offered for sale. In addition, the layout of the area makes provision for amenities.

* * * *

Chilham Castle and village will be visited on East Kent Tour No. 7 of the British Architects' Conference. The 15th-century houses pictured on this page are to one side of the village green. In the lower picture are houses by the architects Jackson and Jackson which have been awarded a 1953 Housing Medal.

* * * *

At least one of the Conference tours to Rye passes close by Lydd, the southernmost corner of Kent. Here is a small housing estate with Smede Dean brick facings to external walls by architects Clifford Culpin and Partner, general contractors, A. O. Laird, Ltd. The housing and layout plan are illustrated on the opposite page.

* * * *

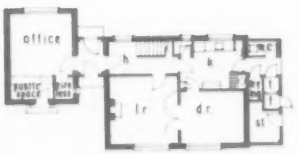
On the same page are illustrated a senior police officer's house at Sittingbourne and houses built for fire brigade personnel in connection with the Medway Fire Station described on page 689. Both schemes were designed by the County Architect, Sydney H. Loweth and his staff, who have designed much police housing in the county.

OLD CHILHAM

NEW CHILHAM

HOUSING AT LYDD

FIRST FLOOR



GROUND FLOOR

POLICE HOUSE, SUTTON VALENCE

LYDD HOUSING LAYOUT

SENIOR POLICE OFFICER'S HOUSE

MEDWAY FIRE STATION HOUSING

Private Houses

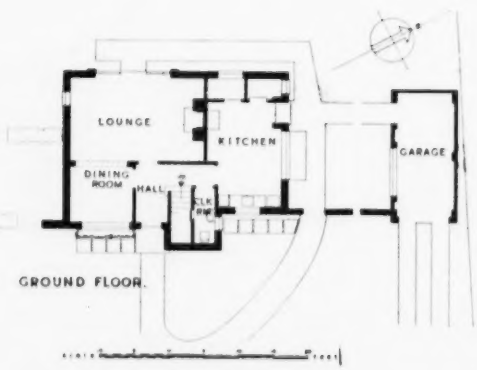
COTTAGE NEAR HIGH HALDEN

ON the main road between Tenterden and Ashford the small isolated cottage pictured on the left catches the eye. The front has been repaired with dark grey-green felt tiles, which look extremely well with the white paintwork, pale primrose front door and red tile roof.

* * * *

The house near Longfield was designed by Oliver Steer. H. C. Cooks, Ltd., were the general contractors. Situated in a wood the owner requested that the lounge fireplace should be designed to burn logs, with a solid-fuel cooker-boiler behind, electricity being used as a stand-by. The primary flow and return pipes pass into and rise in a clothes-drying cup-

HOUSE NEAR LONGFIELD



BUNGALOW AT FOLKESTONE

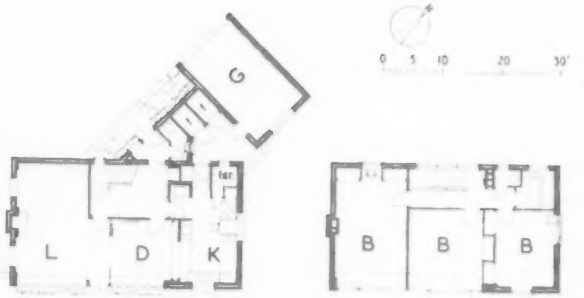
board off the kitchen, the latter being large enough for breakfasts and for the weekly wash. A long wall links the garage and screens a court containing the fuel bunkers, bins and clothes lines.

The 19ft-long lounge and dining recess at right angles have a pleasant wood float textured wall plaster and insulation board ceiling, all finished a light mushroom shade, which looks well with the natural oak floor, cornice and doors. The kitchen and cloakroom have red quarry tile flooring, with high gloss painted walls in gay colours, and all bedrooms have oak strip flooring, with either hand-printed wall papers or distemper.

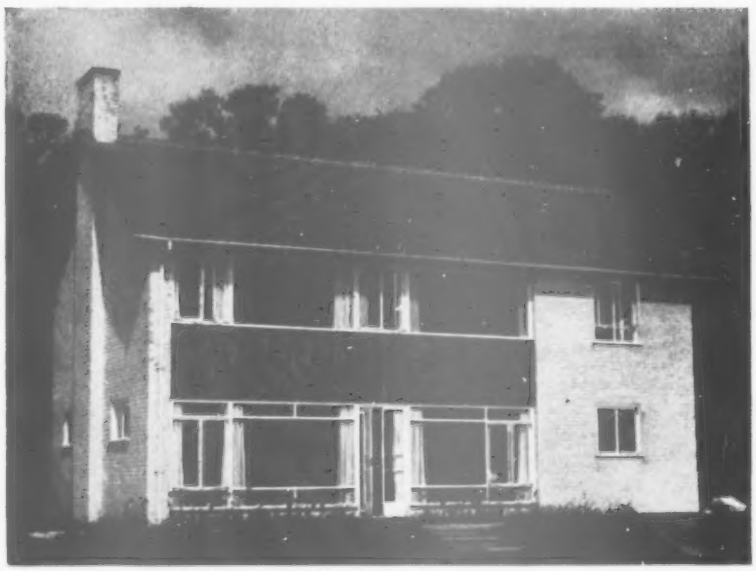
The flower troughs are constructed of asbestos cement guttering, decorated with studs and wire.

The total cost including garage but not fees

HOUSE AT ASH, NEAR CANTERBURY



HOUSE AT WALMER, NEAR DEAL



was approximately £2,700. Only 129 sq ft of a total of 1,220 sq ft is used for circulation.

* * * *

The bungalow at Folkestone is on high sloping ground just above the town on the left as you enter from Canterbury. It is set in a nursery garden and from the long window in the living-room is a magnificent view of the town and sea below. The planning is simple and open and the treatment contemporary. C. W. N. Wright was the architect. He won the Guildford Civic Hall Competition, 1950, in partnership with L. F. Richards who has also done work locally.

* * * *

The house at Ash and that at Walmer are both by the same architect, L. R. Barlow, who lives in a charming cottage at Sandwich and teaches at the Canterbury School of Architecture under R. W. Paine.

The house at Ash was designed to accommodate the owner, his wife and three children, one of whom had left home by the time the licence came through after two wars. Walls are faced with Stewartby lights from the London Brick Company. Roof covering is Marley Anglia tiles. The first floor is in precast concrete slabs. The Operative Builders and Decorators, Ltd., of Birchington, were the General Contractors.

* * * *

The site of the house at Walmer adjoins Walmer Castle. On a fine day a clear view of the Goodwin Sands and French coast is obtained from the living-room windows.

The construction is 11in cavity walls with wood-joisted first floor and T.D.A. trussed rafter roof covered with Marley Anglia pantiles. Double glazing is used to all non-opening lights on the elevation facing the sea and under the windows are gill tube heaters. The boarding on the main elevation is chestnut T. & G. and the external wall finish is "Ellcem" on London Brick Co.'s Commons. General contractors were W. J. L. Piper & Son, Ltd.

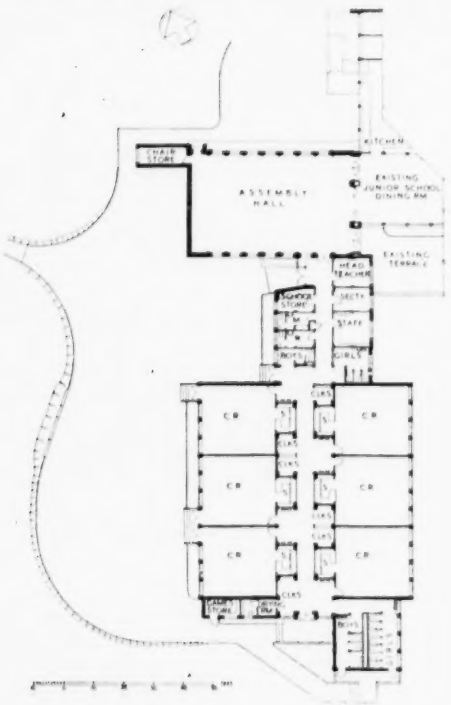
Schools

KENT, we believe, was the first county to sign up its one hundredth contract for schools since the war. The County Architect, Sydney H. Loweth, has been handing over on an average one new school every 3½ weeks for over four years. The County Architect's department are designers of many of the new schools; private architects have also been commissioned to work in collaboration with the County Architect.

The two schools at Footscray Place for Chislehurst and Sidcup are sited side by side. The first stage with spread out plan accommodates 360 places for juniors. The latest school has a double-banked type of plan and accommodates 240 places for infants. The general contractors were Myton & Son, Ltd., and Richardson, Ltd. respectively. The schools were designed by H. & H. Martin Lidbetter.

* * * *

CHISLEHURST AND SIDCUP: FOOTSCRAY PLACE COUNTY PRIMARY SCHOOL



The view of Broomhill Bank School, Tunbridge Wells, shows the new Assembly Hall from South. The school is a special residential school for girls and will ultimately accommodate 120 pupils and 10 staff when other extensions are added from time to time. Architects: Pite, Son & Fairweather. General contractors: F. J. Moreton & Son, Ltd.

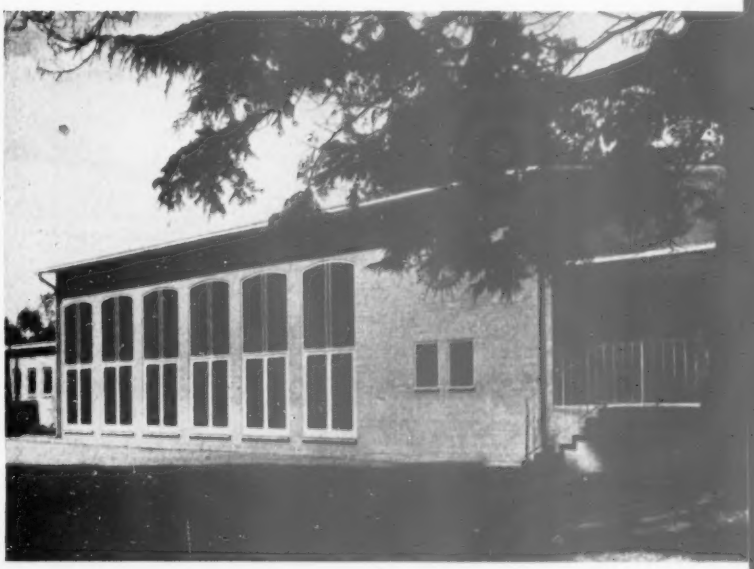
* * * *

Challock County Primary School for 120 children is the first village school to be completed post-war and its plan will probably form the basis for the other village schools, some 300 of which are required throughout the county. The County Architect's department were the architects; Mr. J. B. Sharman, the general contractor.

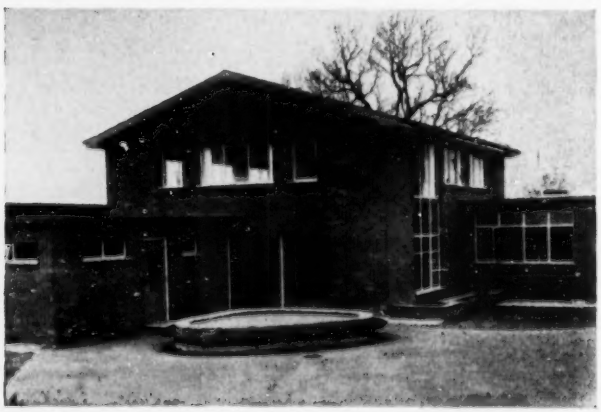
* * * *

The Whitstable Sir William Nottidge County Secondary School, named after the chairman of the Kent Education Committee, is for 450 boys and girls. Designed by F. R. S.

BROOMHILL BANK SCHOOL EXTENSIONS



CHALLOCK COUNTY PRIMARY SCHOOL



CHALLOCK SCHOOL PLAN

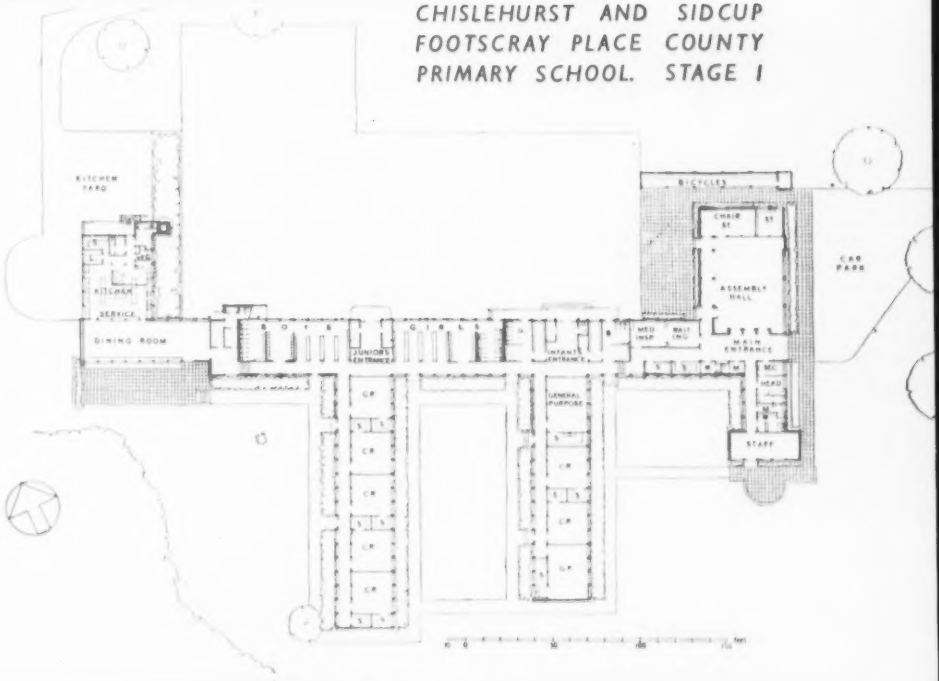
WHITSTABLE SCHOOL

Yorke, E. Rosenberg and C. S. Mardall, the school will be fully illustrated in a future issue of the *A. & B. N.* The south elevation which faces the road is shown in the picture with entrance hall on the left and classrooms stretching away in the distance. General contractors: Rice & Son, Ltd.

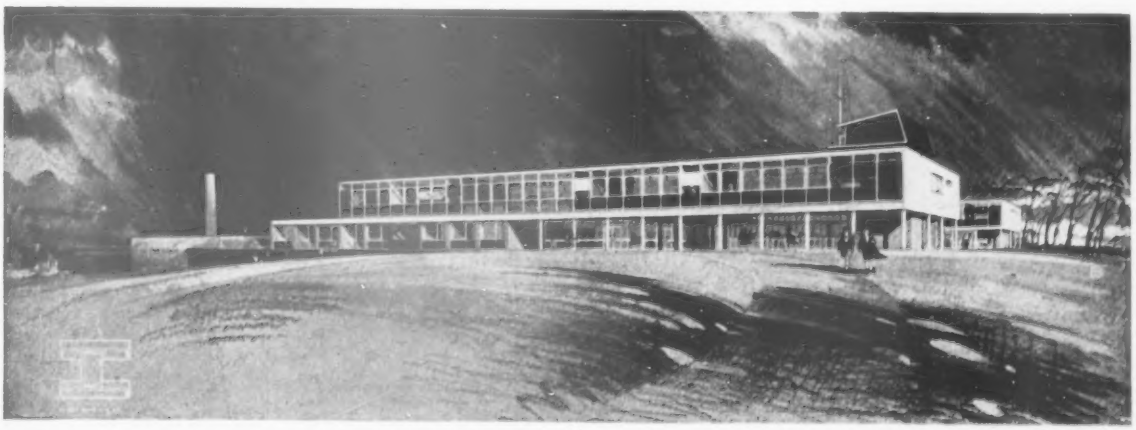
* * *

The last picture on this page shows a new County Secondary School for girls and boys at present under construction at Herne Bay. Architects: E. D. Lyons and L. Israel. The school is of interest as the superstructure above first-floor level is in timber supporting light steel roof trusses and, although in excess of the floor area per pupil laid down by the Ministry of Education, is costing much less than the permissible amount. General contractors: J. J. Clayson & Son, Ltd.

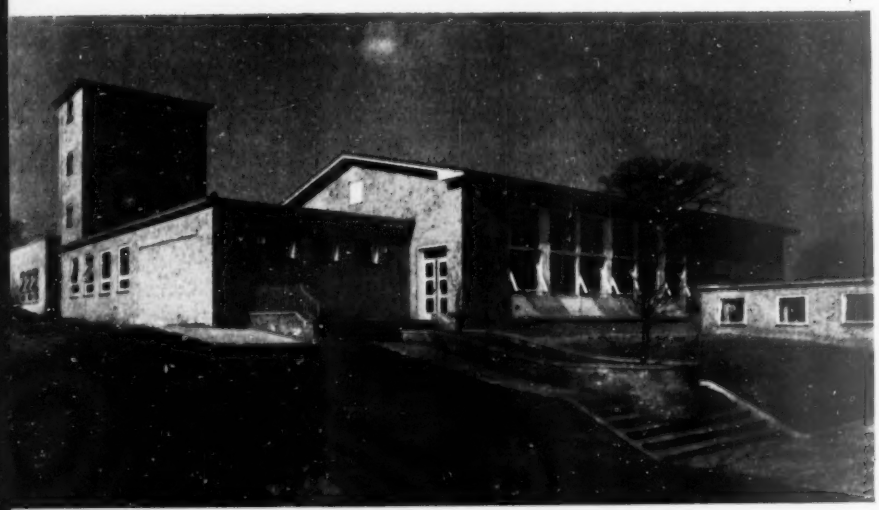
CHISLEHURST AND SIDCUP FOOTSCRAY PLACE COUNTY PRIMARY SCHOOL. STAGE I



HERNE BAY SCHOOL



ST. STEPHEN'S COUNTY PRIMARY SCHOOL, HACKINGTON



CRAYFORD MAYPLACE COUNTY PRIMARY SCHOOL

SEVENOAKS, WILDERNESSE SECONDARY SCHOOL

Schools

THE new St. Stephen's School, Canterbury, consists of four Junior Classrooms and three Infant Classrooms, providing accommodation for 280 children between the ages of 5 and 11 years.

The area of St. Stephen's has an ancient village green with Almshouses, Public House and Church, with more recent residential buildings in the vicinity. The school is sited at the foot of a steep southerly slope with views towards Canterbury and is adjacent to the Church. The school is intended to serve this neighbourhood which is developing. The existing village school will close when the present exceptional conditions are relieved.

The view of the school illustrated is taken from the entrance gates. Architects: L. Hugh Wilson, City Architect; C. W. Gummer, Deputy City Architect. General contractors: Ringer Building Works, Ltd.

* * *

Crayford Mayplace School is for 240 infants and was completed this year. Architects: Braddock & Martin-Smith. General contractors: J. H. Durrant & Son, Ltd.

The school has been planned with the classrooms in the lower part of the site facing south-east. The administrative block links the classrooms with the assembly hall, which also faces south-east.

* * *

The Sevenoaks Wildernesse Secondary School for boys is on the outskirts of Sevenoaks and is sited in well-wooded parkland and placed so that full advantage is taken of well-established trees.

The building was originally designed for primary education purposes, but, owing to the prior needs of secondary education, had to be temporarily modified to adapt it for use as a Boys' Secondary School.

Accommodation has been provided for 280 pupils (secondary) or 370 pupils (primary).

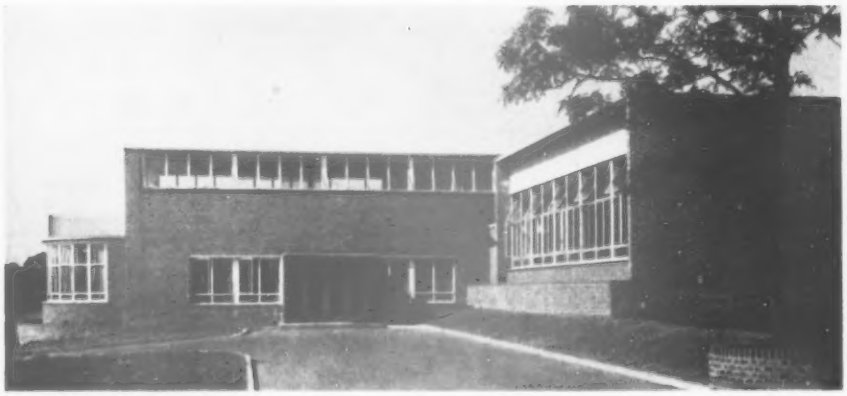
The construction consists of a pressed steel frame with brick walling. Architects: The County Architect's Department. County Architect, S. H. Loweth. General contractor: Leslie & Co., Ltd.

* * *

The Maidstone Shepway School is for 520 places and is used as a mixed school until the second half is completed, work on which is expected to commence in July of this year. Following completion of the second half the necessary adaptations will be made to the first school to make it wholly for boys;

MAIDSTONE, SHEPWAY COUNTY PRIMARY SCHOOL

GRAVESEND, WESTCOURT COUNTY PRIMARY SCHOOL



CHISLEHURST & SIDCUP REDHILL ROAD PRIMARY SCHOOL

ROCHESTER, STROUD
ELAINE AVENUE SCHOOL

the second school will be for girls.

The building is constructed of load-bearing brickwork using yellow Kent stocks generally with low-pitched roofs except for the administrative wing and kitchen, where flat roofs of hollow tile construction have been adopted. Architects: Pite, Son & Fairweather. General contractors: W. P. Banks, Ltd.

* * *

Gravesend Westcourt School is one of the first of the schools to be built under the Ministry of Education standard of £140 per place and the building was finished four months ahead of the contract period.

The school was designed for 360 children and also includes a dining room and cloakroom accommodation for a Junior School which is on the same site.

The construction is partly steel framed and partly of load-bearing brickwork, the assembly hall wing having steel portal frames with brick panel walls and the classroom wing having steel stanchions on the south side with 11in brickwork for the spine wall and external corridor wall.

The assembly hall and infants' dining room have been combined, the only division being low swing barrier gates which are painted bright colours. The ceiling follows the pitch of the roof. Architects: Pite, Son & Fairweather. General contractors: F. Parham, Ltd.

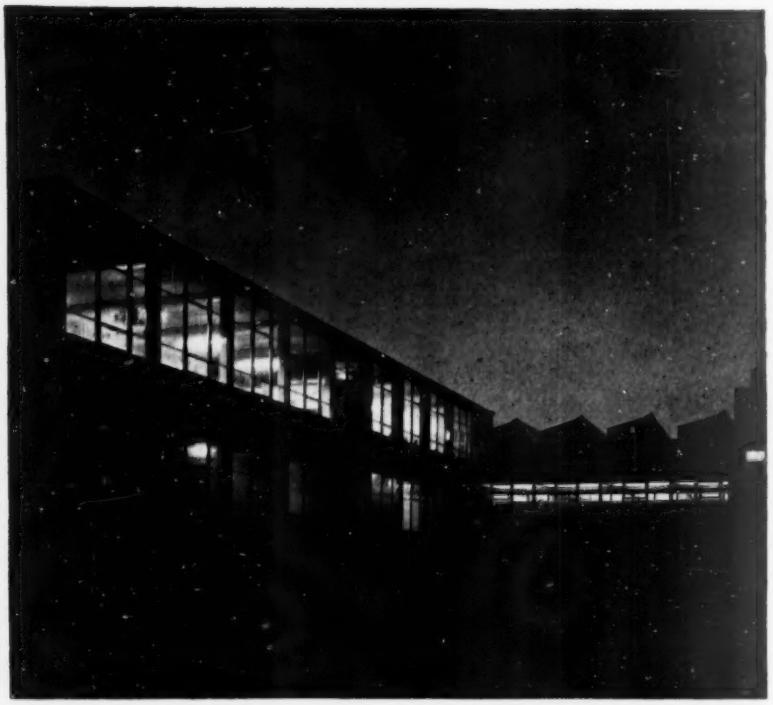
* * *

Chislehurst and Sidcup Redhill Road School accommodates 400 pupils. Each classroom has a southerly aspect and provides children with direct access to a paved area where lessons can be given out of doors when the weather is warm. There are ten classrooms, and the canteen will provide dual-purpose accommodation until the remainder of the school is built. Architects: County Architect's Department. County Architect, S. H. Loweth. General contractor: R. Hopkins & Sons.

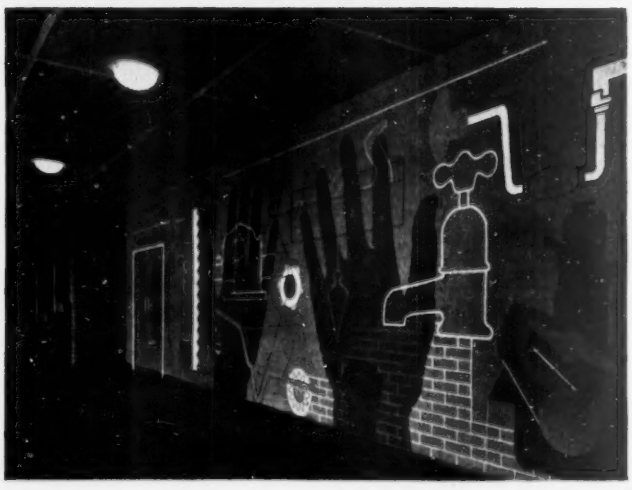
* * *

Elaine Avenue School, Rochester, has been designed for 280 infants' places. Architects: Moiret & Wood. The general contractors: Kent & Sussex Contractors, Ltd.

The canopy is of patent glazing supported on steel tubing cantilevered from the reinforced concrete part which is a projection of the main entrance vestibule ceiling.



FOLKESTONE TECHNICAL COLLEGE WORKSHOPS



Technical and in Public Service

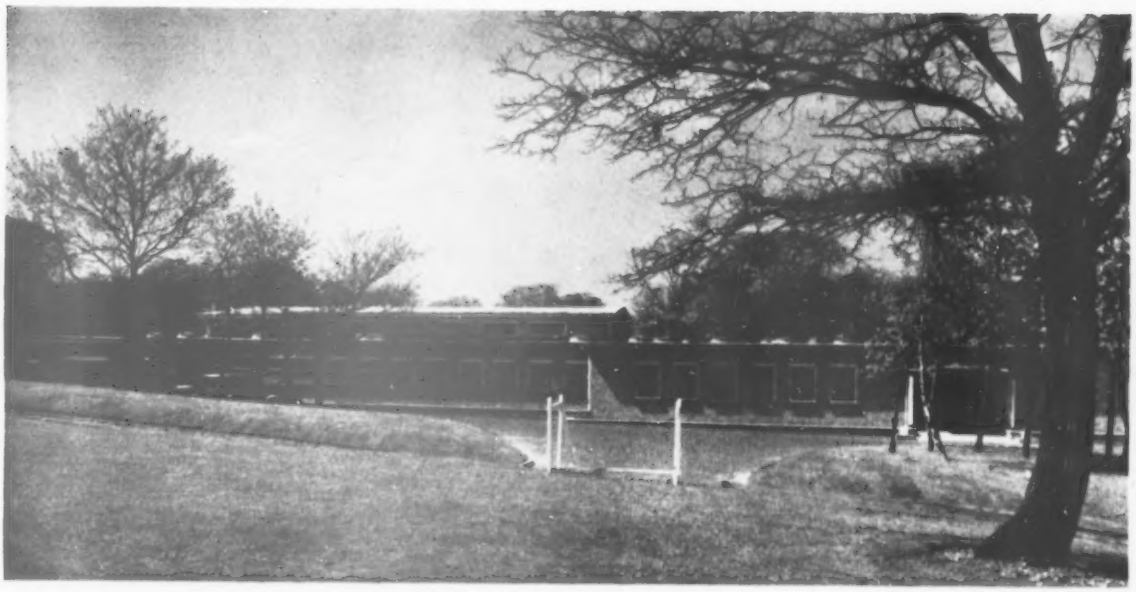
THE new workshop at Folkestone Technical College should prove of interest to members of the British Architects' Conference. The workshops have been planned with normal factory type planning as part of a full-scale technical college which will eventually replace the existing buildings on the same site. Of steel-framed construction, both external walling and internal partitions are composed of cellular laminated plastic panels with a self-coloured finish. Architects: County Architect's Department. Sydney H. Loweth, County Architect. General contractors: O. Marx & Son, Ltd.

The first part of the Dartford Technical College, also designed by the County Architect, is under construction. The Dartford project is the largest yet to be undertaken by the Kent Education Committee.

* * * *

The new out-patients' department of Woolwich Memorial Hospital, Shooters Hill, was opened by the Duchess of Kent on May 6 this year. The plan shows the general arrangement

MEDWAY FIRE STATION PLANS



WOOLWICH MEMORIAL HOSPITAL OUT-PATIENTS

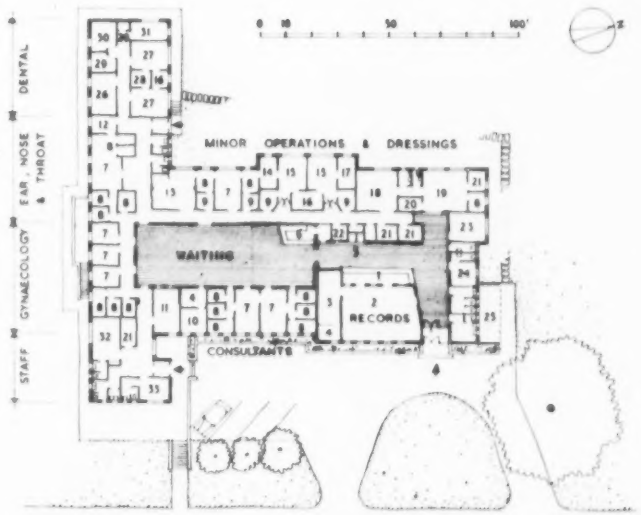
of accommodation and the picture a view of the front. Architects: Pite, Son & Fairweather. General contractors: Greenaway & Son, Ltd.

* * * *

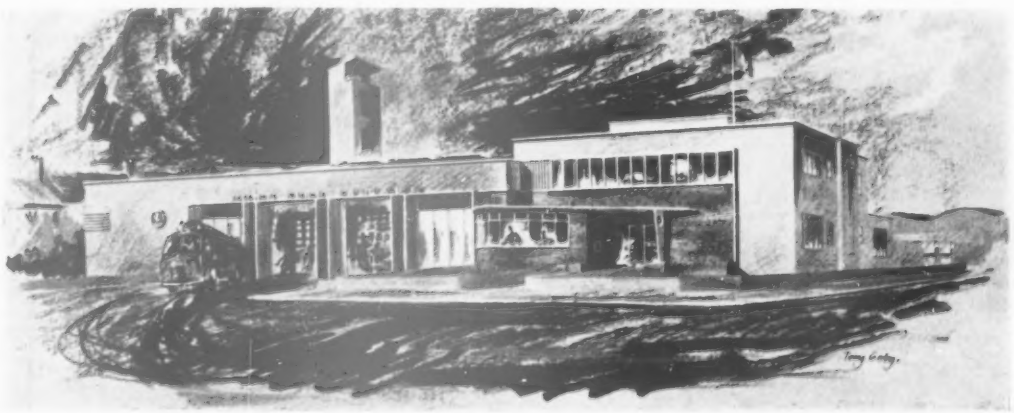
The Medway Fire Station, Watling Street, Chatham, is nearing completion and will replace the existing fire station situated in the archways beneath Chatham High Street. The Watling Street site was the only area of land in that district which satisfied the requirements of the Fire Brigade. A future Ambulance Station is provided for on the same site and houses for firemen on back land nearby are illustrated on page 681. Architects: County Architect's Department. Sydney H. Loweth, County Architect. General contractors: F. Parham, Ltd.

* * * *

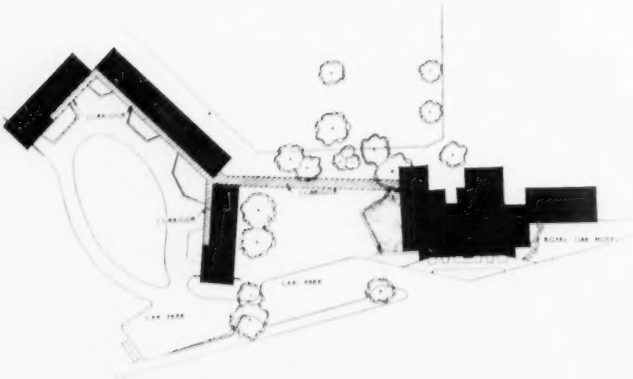
1, Registration Bureau. 2, Patients' Records. 3, Typists. 4, Office. 5, Telephones. 6, Canteen. 7, Consulting rooms. 8, Examination Room. 9, Undress. 10, Welfare. 11, Dispensary. 12, Fitting Room. 13, Plaster Room. 14, Scrub-up. 15, Minor Theatre. 16, Sterilizing. 17, Dirty Wash. 18, Recovery. 19, Minor Dressings. 20, Dark Room. 21, Store. 22, Cleaner. 23, Medical Typists. 24, Sister. 25, Pram Shelter. 26, Dental Waiting Room. 27, Dental Room. 28, X-Ray. 29, Rinsing Room. 30, Dental Recovery. 31, Dental Workshop. 32, Medical Staff Room. 33, Staff Room.



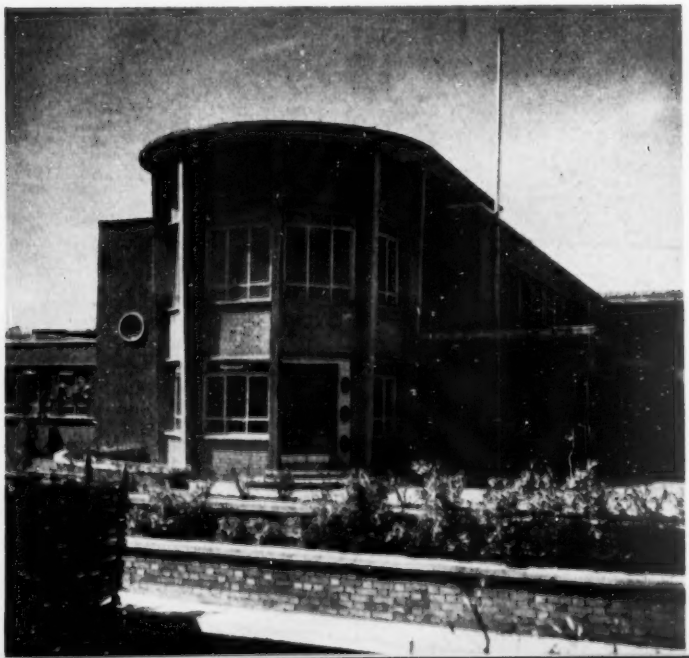
MEDWAY FIRE STATION, CHATHAM



MOTEL NEAR LYMPNE



PACKING STATION, FAVERSHAM



BUS GARAGE, CANTERBURY

THE second motel in the country is almost completed a few miles from Folkestone at the Royal Oak Hotel, near Lympne Airport. Each unit, of which there are three basic types, can take one to six beds and has a lock-up garage attached. Architect: Louis Erdi.

* * *

At Faversham a large packing station with houses for personnel was erected a few years after the war for East Kent Packers, Ltd. Architect: Howard Leicester & Partners.

* * *

Two large post-war jobs completed by a well-known local architect, H. Campbell Ashenden, at Canterbury are a garage for East Kent Road Car Co., Ltd., and a warehouse for Swoffer & Co., Ltd.

* * *

More recently a small office building has been completed at Sandwich for a firm of timber merchants, with principal's offices overlooking the River Stour. The simple exterior is finished in multi-coloured Dorking bricks with some strip boarding in oak and Kentish Rag side walls to entrance hall. Architect: L. R. Barlow. General contractor: G. H. Denne & Son, Ltd.

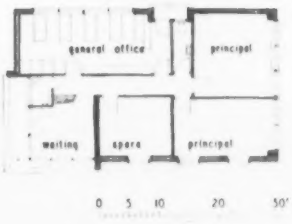
* * *

A new warehouse was completed at Aylesford Estate, Maidstone, last year, designed by Llewellyn Smith & Waters, architects. The building was erected for S.P.D., Ltd., by C.A.S. (Industrial Developments), Ltd., the general contractors being the latter's associated company, C.A.S. (Contracts), Ltd.

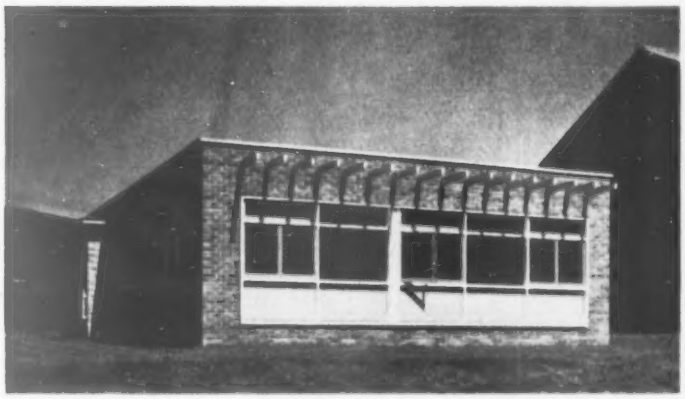
* * *

On the outskirts of Canterbury to the East, not far from St. Stephen's School, the new abattoir illustrated at the bottom of page 691 has recently been completed by Ministry of Works architects.

WAREHOUSE, CANTERBURY



OFFICES, SANDWICH



Commercial Premises

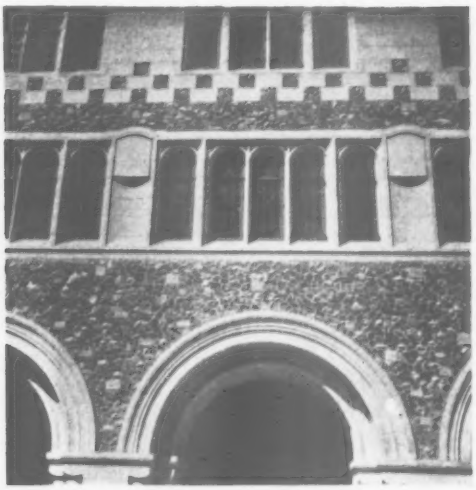
FACTORY, MAIDSTONE

ABATTOIR, CANTERBURY

Canterbury Cathedral Precincts

CATHEDRAL PRECINCTS LIBRARY

KINGS SCHOOL WAR MEMORIAL, LARDER GATE



IN the precincts of Canterbury Cathedral a new library is under construction for the Dean and Chapter. Architects: Denman and Son. General contractors: G. H. Denne and Son, Ltd. The materials —stone and flint—have been carefully chosen to harmonize with adjoining work.

Close by the new library is a completed War Memorial building for Kings School by the same architect and general contractor. It adjoins and is built over the ancient Larder Gate.

Inside the Cathedral Denman and Son are architects for two altars: a memorial altar to the late Archbishop Lang and another in St. Michaels Chapel (the Warrior's Chapel).

* * *

The Marlowe Civic Theatre, Canterbury, was opened at Easter, 1951, and consists of the conversion of an old cinema with the addition of a new stage block. It will seat 700 persons.

The theatre is sited in St. Margaret's Street and is adjacent to the proposed new relief road through the city and when replanning proposals develop, the theatre will have a corner site.

The auditorium of the old cinema was rectangular in plan with a large balcony. A new foyer had been formed by the previous owners and the two floors over let out as offices or used as staff accommodation. A brick and timber elevation to St. Margaret's Street was part of this early scheme.

The Corporation decided to build on a stage and dressing room block of suitable size for normal repertory requirements. This stage is 50ft by 25ft with a 24ft by 15ft proscenium opening. Leading off this on one side is a paintshop and scene dock. At the other side is a wardrobe room and star's dressing room with

Civic and College Buildings

MARLOWE THEATRE
CANTERBURY

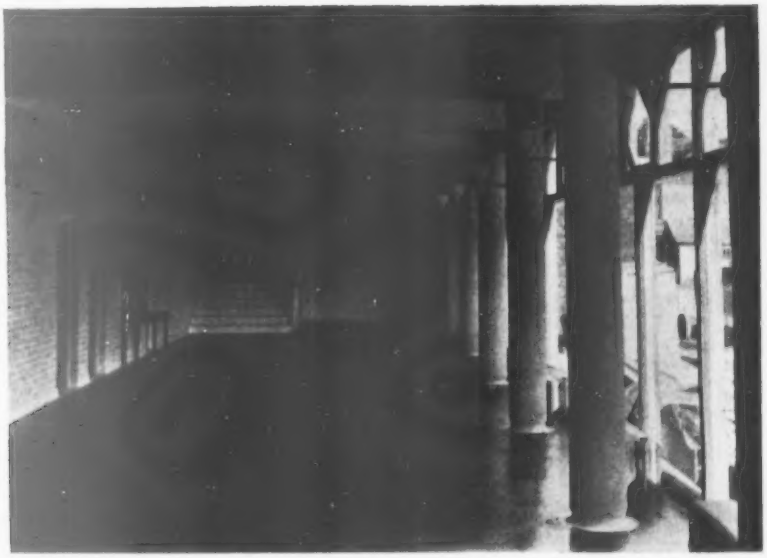
general lavatory accommodation. Provision is also made for property storage, stage manager's office and quick change space.

At first floor level are two stars' dressing rooms and a chorus room with female lavatory accommodation. The electrician perch is also at this level projecting into the wings.

Second floor level has two more stars' dressing rooms and another chorus room with male lavatory accommodation. At this level there is a fly gallery to the stage.

Architects: L. Hugh Wilson, City Architect; deputy, C. W. Gummer.

General contractors: Operative Builders and Decorators, Ltd.

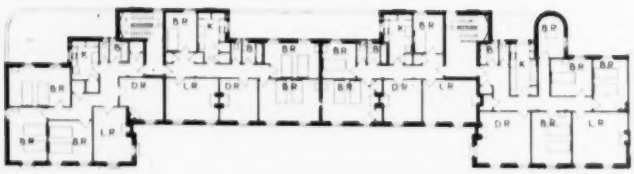


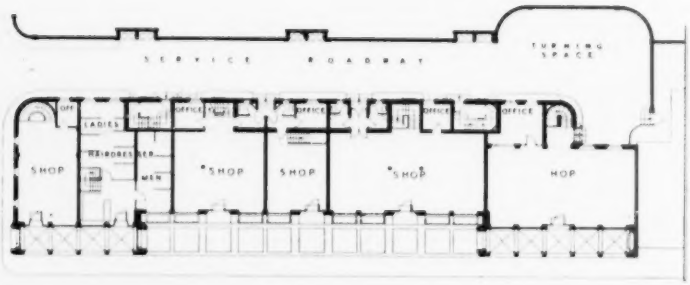
WITHERSDANE HALL OF RESIDENCE,
WYE COLLEGE

Withersdane Hall of Residence, Wye College, erected for women students of the Agricultural College, was the first hall of residence to be erected after the war. The *A. & B.N.* published articles on the first and second stages of development in issue February 3, 1950, and on the third stage in issue February 23, 1951. The architects were Richard Sheppard and Partners.

The top view shows the entrance hall at the end of stage 2 and below is a view of the West front which faces on to the drive. General contractors: G. E. Wallis and Sons, Ltd.

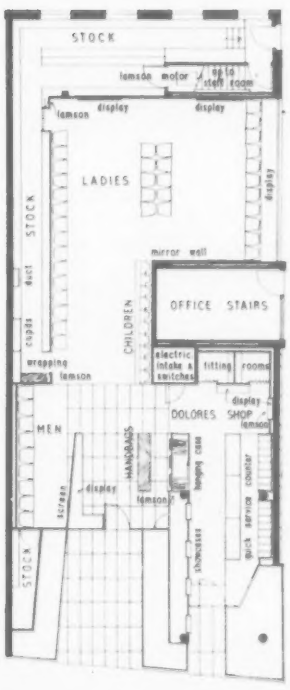
BURGATE HOUSE

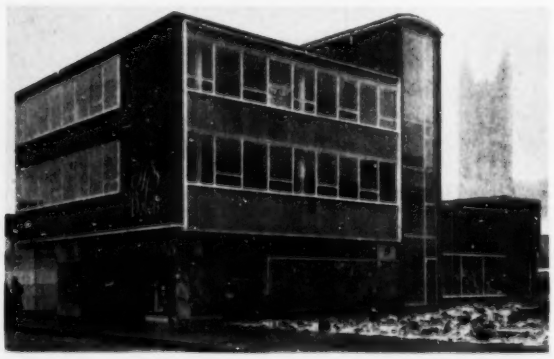




SHOP AND FLAT PLANS, BURGATE

Shops in Canterbury





DOLCIS SHOE SHOP PLAN

A GROUP of shop premises and residences were destroyed in Burgate during one of the Baedeker raids on Canterbury. The bomb-damaged area has been replaced with six shops and eight flats approached by separate entrances from an approach road at the rear. The building—Burgate House—has been designed to harmonize with the Cathedral Close and adjoining buildings in Burgate. Architects: Denman & Son. General contractors: John E. Wiltshire & Co., Ltd.

* * * *

Central area redevelopment in St. George Street includes nine shops for the Ravenseft Properties, Ltd., architects, Ardin & Robins, illustrated at the top of this page. Opposite the Ravenseft properties are F. W. Woolworth, Ltd., by their staff architect, and a Dolcis store by Ellis E. Somake, staff architect to Upsons, Ltd. Other buildings in course of erection include a Pearl Assurance Co. building, architects Ernest Bates and W. G. Sinning; Messrs. Barretts (Canterbury), Ltd., architect H. Anderson; and Kent County Newspapers, Ltd., architect H. Campbell Ashenden, who designed Crippen's shop at the foot of this page.

The new Dolcis store has been rebuilt on the same site as the original Dolcis shop which suffered a direct bomb hit. The new three-storey building has shops on the ground floor and offices above.

The elevation facing Iron Bar Lane is shown in the picture and expresses frankly the entrance and staircase to the upper floor offices. The panels contained within the precast Portland stone surround to this elevation are ribbed Mount Sorrel granite precast stone, and the screen wall to the ground floor is of knapped flint echoing the colour and texture of St. George's Tower farther up the street. General contractor: G. H. Denne & Son, Ltd.

ST. GEORGE STREET SHOPS

DOLCIS SHOP INTERIOR

Continued from page 679]

partially occupied, and it is expected that the whole, occupying some 600 workers, will be complete in two or three weeks.

Another successful arrangement has been made with the Emco Brass Manufacturing Company, Limited, who have leased about three acres for a brass foundry and machine shops for valves and special requirements for the oil industry, and their building is now in progress.

A further four acres for the employment of some 300 workers is at present under negotiation, and it is hoped will soon be concluded, and only about 3.8 acres now remain for disposal.

It may, therefore, be claimed that while the start was perhaps disappointingly slow, the scheme is now well under way, and it is hoped that the turnover of wages in the district, which, when the estate is fully developed, may be well over half a million pounds a year, will be beneficial to the established traders in the town. Perhaps more truly important is the hope that young people can enter steady employment in skilled or semi-skilled occupations, and that, as the Town Clerk said in discussion of this project, we do not in the future "produce our young people for export."

In addition to the Council's industrial estate, two smaller clothing factories have become established since the war in existing premises, and a third is expected to start shortly, and, in fact, is at present recruiting labour.

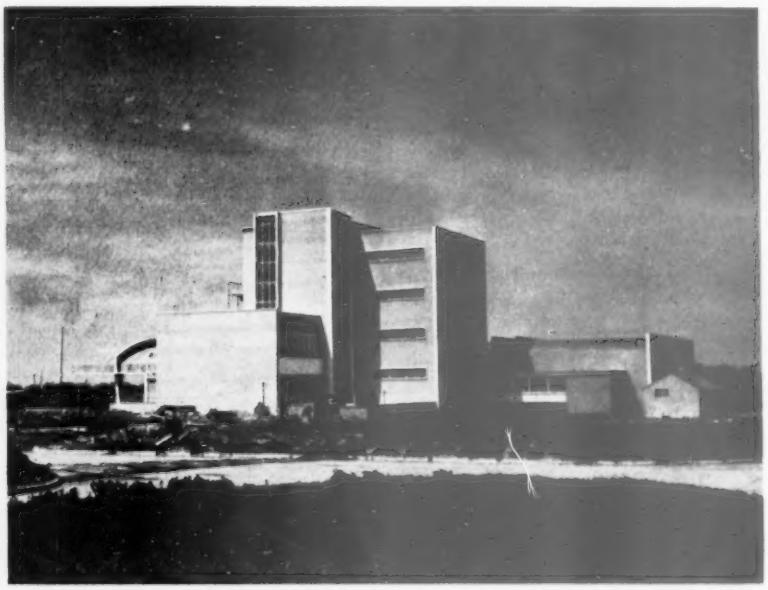
It will be noted that these industries do, in fact, comply with proposition 5 above, and it would seem that such industries need not feel themselves confined to the traditional centres for various trades.

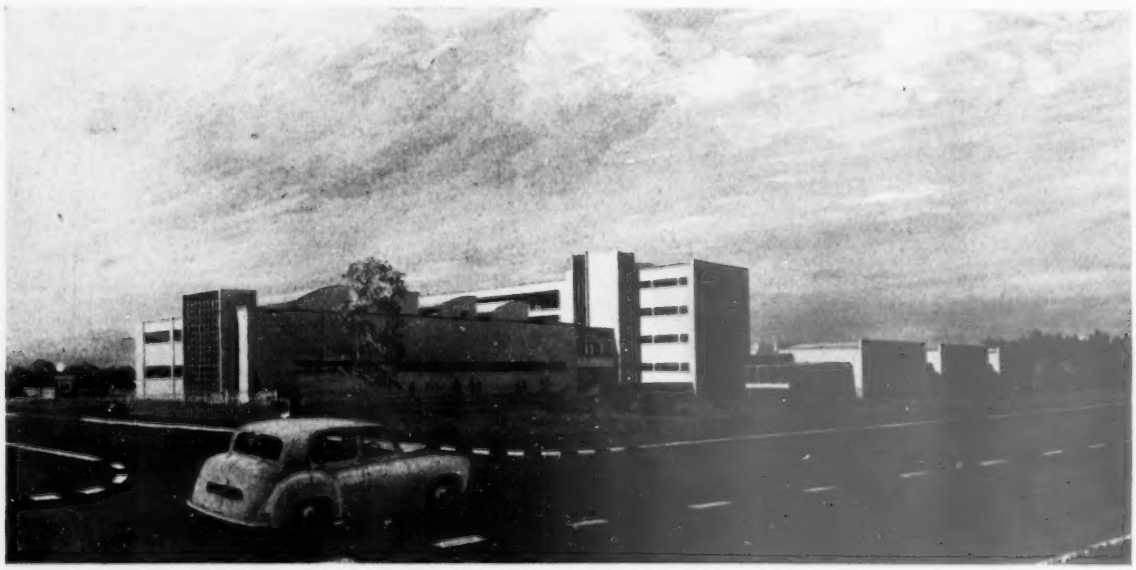
With regard to proposition 4, the labour situation has been amply proved by the steady recruitment to the new industries and the wastage to seasonal occupations, which the pessimists foretold would ruin industrial prospects in the area, has been practically negligible. The quality of the labour recruited has also been very satisfactory, and has readily responded to training.

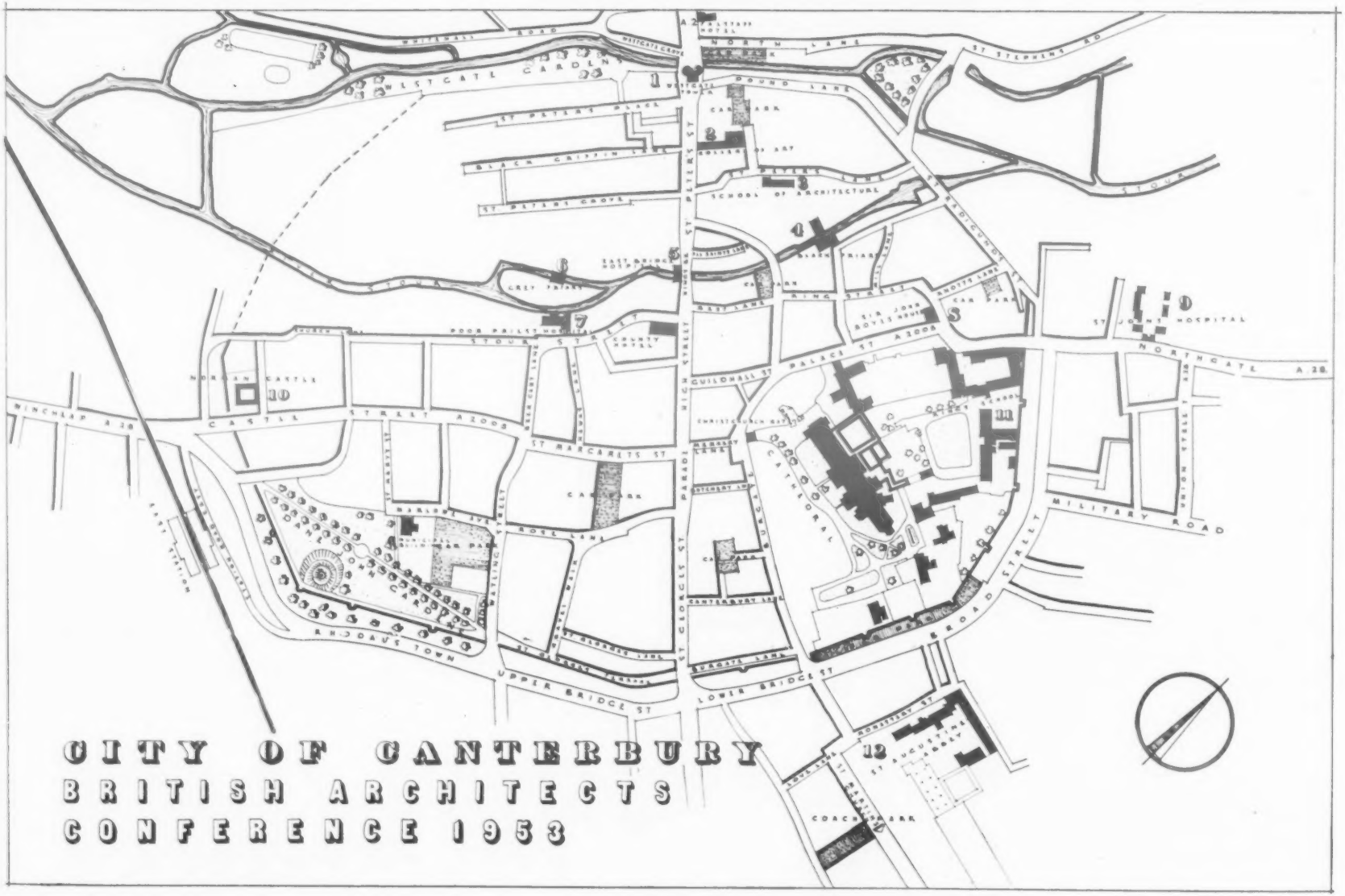
FACTORY NEAR MARGATE

ON the Ramsgate-Margate Road a new factory nears completion for the Klinger Manufacturing Company on one of the sites on the Margate Industrial Estate referred to in the article above. Here the well-known Klingsill Nylon Hosiery and children's socks will be produced. The Architect for the scheme is Harald Weinreich and the General Contractor is Rice & Son, Ltd.

The top picture shows the first stage of the factory nearly completed and below is a perspective view of the whole scheme. The dark end wall is faced with cherry red glazed tiles with a white joint. The photograph was taken without previous knowledge of the perspective drawing and it is interesting to note the similarity of viewpoint and quality of tone value obtained in the two pictures.







PLACES OF INTEREST:

1. WESTGATE TOWER.
2. COLLEGE OF ART.
3. SCHOOL OF ARCHITECTURE.
4. BLACK FRIARY.
5. EAST BRIDGE HOSPITAL.
6. GREY FRIARY.
7. POOR PRIEST HOSPITAL.
8. SIR JOHN BOYLES HOUSE.
9. ST. JOHN'S HOSPITAL.
10. NORMAN CASTLE.
11. KINGS SCHOOL.
12. ST. AUGUSTINE'S ABBEY.

EXTRACTS FROM PAPERS READ AT THE BRITISH ARCHITECTS' CONFERENCE

RESEARCH & DEVELOPMENT—The Work of the Ministry of Education

By S. A. W. JOHNSON MARSHALL, A.R.I.B.A. Chief Architect to the Ministry

IN his inaugural address last year the President of the R.I.B.A. referred to architecture as a service. It is pertinent to ask what kind of service the architect has rendered in the last six difficult and exciting years. The school building programme is a particularly good vehicle to use for this review, because unlike other types of building such as housing or industrial buildings, schools have been almost the exclusive responsibility of the architect.

The extent of the programme is approximately £40,000,000 a year. And that programme has *got* to be carried out in time to house the growing child population. With very few exceptions all children have so far been provided with a seat. This has meant building over 1,500 schools—a much greater effort than in any previous period of equivalent length.

Monetarily, perhaps 1949 was the critical year because the economic crises of that autumn produced a challenging situation. The choice had to be made between fewer schools at the same price, the same number but of poorer quality or the same number and the same quality at a lower price. The profession accepted the challenge and with the whole-hearted co-operation of their educational clients they launched a carefully considered attack on costs. That attack has been continuously maintained against a rising tide of prices of both labour and materials. Its first phase comprised the reduction of the total area of the building without reducing teaching area—in fact the area devoted to teaching has in many cases increased. The second phase is directed towards the simplification of techniques and components from lavatory basins to boiler houses. It must be made clear that the aim of the Ministry has not been just cheapness—it has been rather to encourage architects to strive after the right balance between quality and economy.

The results of their work are surprising. In 1949 secondary schools had an average area per place of 111 sq ft and a cost per place of over £320, which at current prices would be equivalent to over £450. Now the corresponding figures are 75 sq ft and £240 a place, and the quality of building is being maintained.

The average costs, in real terms, for primary and secondary schools are 45 per cent cheaper than they were in 1949. To put this another way, each school place now takes little more than half the labour and materials that it did in 1949. Furthermore, schools are slightly more economical than they were before the war.

While these figures are somewhat sensational they do not conceal any black magic. They have been attained by deliberate re-thinking of most of the familiar problems and by hard work. In both of these activities the architect has been immensely helped by working more closely than usual with a client who has made notable contributions to the better arrangement of space and who now gladly accepts the adventure of using new buildings whose planning is fundamentally different from those of 1939.

It is the work of local education authorities through their public and private architects which has produced these figures, but the Ministry of Education has inevitably had to take a part in the early stage of the production line. Mr. Aslin and Mr. Loweth in their papers describe how the work is being done by local education authorities, so it might be useful if I tried to summarize the role of that part of the Ministry of Education which is responsible for building.

In 1949 it became evident that the solution of many of our problems which were labelled "building" lay somewhere between administration, education and technics, and that they would yield far more readily to a combined attack by these three skills than by a series of separate attacks. The Ministry, therefore, amalgamated its administrative and technical branches responsible for building.

The hybrid, called Architects' and Building Branch, with its prime motive of shared responsibility, is a unique unit of central government. It is run jointly by a senior administrator and an architect and has senior educators working permanently with it. Its functions may be summarized under three headings:—

Economic planning which is concerned with the educational bid for a share of the country's capital investment and the preparation and control, in conjunction with other branches and local education authorities, of the annual building programme. Among the instruments are statistics of educational building progress, speed of building and costs.

It was realized that architects could give very much better service if they knew as far ahead as possible what buildings they had to build and when they were expected to build them. In consequence, a system of annual programming was introduced in 1949. This gives one to two years' notice to local authorities of their whole annual programme, and two to three years' notice of half their next programme. The new approach has enabled the Ministry to make a clear statement *before* the architect starts work of all the rules governing school building. These cover the Building Regulations (which have been largely re-written in terms of principle), the amount of money he will be allowed to expend on any given project, and the amount of rationed materials.

Territorial work. This comprises teams of architects and administrators who deal with local education authorities' building programmes and their schemes, the settling of schedules of accommodation, the discussion of schemes in their embryonic stage, and the detailed administration of timber, steel, and monetary allocations; and finally, liaison with the Ministry of Works Regional Offices in order to obtain starting dates.

It has been the aim of the Ministry to try to abolish the unrewarding and unprofitable task of scrutinizing the details of other architects' work and instead to concentrate on the more creative spheres of research into educational needs and their technical implications. It was logical, therefore, to abolish the compulsory submission of sketch designs and so to free our architects to engage in discussions at the embryonic stage of design. These discussions tend to be more constructive because they now take place at the wish of the local education authority and not under the compulsion of the Ministry.

The duty of architects engaged on territorial work (it is so named because it is organized on a territorial basis) is to circulate new ideas on school building that may have originated in the field of local authority building or in the Development Group and to collect worth-while information during the course of their visits and discussions.

Development as we see it consists in the first place of designing to meet educational needs, either in less space or by improving facilities through a better use of space. The second is the development of building techniques, of services, fittings, furniture, etc. An essential basis for both of these is cost planning and cost analysis, to which I will return later.

Experience showed that schools were taking too long to build. Primary schools averaged over two years and secondary schools three years. In many areas where large numbers of schools were required there was and still is an acute shortage of site labour—particularly of bricklayers and of plasterers.

The choice of labour-saving techniques available to authorities who wished to adopt them was, however, very limited; the productive capacity of the manufacturers who were already interested in this work was small in relation to the potential demand. The Ministry, therefore, concluded that additional productive capacity and a wider range of choice ought to be made available, especially to meet the growing need for secondary schools which would arise in 1953 and after. Authorities are free to choose any method of construction; the Ministry's role is confined to encouraging the production of systems which can be profitably used where site labour or traditional materials are scarce.

Earlier, of course, the initiative had been taken by a few local education authorities on their own. Hertfordshire in particular had a new technique of construction which halved the builder's site labour requirements. Very few authorities, however, have had the time and manpower necessary for development work, so the Ministry of Education decided to collaborate with local education authorities and with manufacturers in the design of four systems of construction.

The objective of each of these development projects are the same; namely, to devise a labour-saving system of construction, which should be comparable in cost with any other method of building of similar quality, and capable of being used for three- or four-storey building. A variety of materials was deliberately chosen so that production capacity could be obtained from very different sources.

In each case a school is being used as a vehicle for development, and it is governed by the same rules of accommodation, cost and procedure as any other job. The first project, undertaken jointly with the Berkshire County Council and Messrs.

Hill's of West Bromwich, has just been completed at Wokingham. This comprises a multi-storey 3ft 4in module version of the system originally developed by Hertfordshire.

The second, with a cold-rolled steel frame and stone-faced concrete and asbestos cladding, is being developed in conjunction with the Derbyshire County Architect's Department and Messrs. Brockhouse Engineering Company, Limited. This system is also on a 3ft 4in module.

Aluminium is the basic material for the third system, which is being developed by the City Architect's Department, Coventry, Messrs. Sheppard and Partners, the Bristol Aircraft Company and ourselves. The module here is 4ft.

Finally, we have embarked on a technique whose frame is wholly made up of precast, post-tensioned, reinforced concrete units. It embraces four-storey construction, is on a 3ft 4in module and is being carried out in association with the Borough of Worthing, the County Architect of West Sussex, Messrs. Gilbert Ash and Pre-Stressed Concrete, Limited. Each of the projects described represents in its own way an experiment in school planning which is quite as important as its technical aspects.

Besides structural development, the projects have also included work on daylighting, lighting and heating installations, on lighting and sanitary fittings, ceilings and floor finishes, colour and so on. Continuous and invaluable inspiration in every aspect of this work has been provided by the Building Research Station, whose contribution cannot be too highly praised.

The Wokingham project has been described in detail in Building Bulletin No. 8, and similar Bulletins on the other projects will, I hope, follow.

In each case a local authority is paying the price and the usual professional fees of a normal school. The manufacturers incur the cost of developing their components and have all agreed to sell their components to subsequent local authority purchasers at the same price (subject to changes in cost of labour and materials) as they are charging for the development projects. Thus on the completion of a project, or even before, all the successful items developed and tried in it will be in production and on the market at a known price, extending the range of choice for local authorities.

In order to produce entirely new components quickly and at a reasonable price it has been necessary for quantity surveyors to develop a costing technique which enables the designer to control the cost of his article as he proceeds. This technique has been described in Bulletin No. 4 and it is sufficient to say here that we could not attempt development on any appreciable scale without it.

All the indications are that if we are to continue to get higher-quality buildings, quickly and at a price the nation can afford, very much more development will have to be done. Almost everything we handle, from bath taps and basins through paints to whole systems of construction, is capable of really striking improvements in this direction.

The architect's contribution here is not confined to streamlining a manufacturer's existing product, but is that of a man who finds out the user's real need, and who by tradition and training is the only designer concerned with the whole building and therefore with the design and price of every component used in building. As such he can make a unique contribution if he is *jointly responsible* with the manufacturer for the design of industrial building products. Very few architects are engaged on this type of work and yet there is ample evidence to show that it cannot be wholly successful without their contribution.

It is intended to limit the amount of development work which we undertake by the present size of our branch, but even if it were physically possible it would be undesirable to concentrate too much of this work in one organization. Local authorities with their large programmes—and therefore with considerable potential orders—provide another field in which development can be effectively undertaken, but too few of them have so far been able to spare their best architects to work exclusively on this type of work. The private architect can make a notable contribution; for example, Richard Sheppard and Geoffrey Robson in aluminium techniques and S. Morrison in timber. But if more work of this kind is essential, as I believe it to be, it is worth examining the architect's terms of reference for this new role.

In its present form our code of professional conduct allows an architect to be employed by an industrial firm but forbids him to be a member of that firm. Where he is engaged in this way he usually finds that it is almost impossible for him to attain sufficient authority to be jointly responsible for the product he helps to design. Design cannot be relegated to a subsidiary role in any successful industrial firm. Design and policy are inseparable. In his present capacity the private architect's advice is sometimes taken but often ignored on grounds of policy or "sales." The result is seldom effective. If he is to play his proper role he must be allowed to be a true partner at policy level and this implies a far closer relationship with industry than is attainable by the private architect to-day.

If it is true that the building industry is technically 50 years out of date, then we must pass through a period of rapid and exciting change sooner or later. I believe that we have already embarked on the beginning of this transitional period. Unless the architect is in a position to take and hold the initiative throughout the field of design he is likely to find himself more and more unhappily placed. He will be unhappy not only because he will be forced to use techniques and components designed by other people—this does not matter from a national point of view—but because the tools of his trade will be indifferently designed.

It would be ironical indeed if we owed this state of affairs to the inhibitions of a code of professional conduct which denies half the profession an opportunity of taking a leading role in perhaps the most thrilling opportunity of regaining for our country the architectural position she held in the 18th century.

POST-WAR DEVELOPMENT IN SCHOOL DESIGN

By R. H. SHEPPARD, F.R.I.B.A.

MY task is to review the changes in planning, technique and design in school buildings since the war. As you all know, these have been considerable, indeed revolutionary, when applied, as they have been, in only one field of building. More important for architecture, the methods now being developed for assessing the educational problem and the experimental techniques in executing it have laid the foundations for a new approach to building for a democracy. I believe this approach, when applied to other fields, may prove to be one of the most important developments in architecture. Certainly it is the only instance I can call to mind of a long-term, comprehensive study of all aspects of a design problem. This empiric approach has achieved substantial results already and I hope will be applied to other building types.

Mr. Marshall has sketched what might be called the quantitative aspects—the numbers of school places, the cost, the administrative background. I shall deal with the buildings, the problems of planning for teaching and movement, and with the formal aspects of design which arise from these conditions. I do not propose, therefore, to follow the obvious educational pattern by considering each different class of school separately—primary, secondary and so on—but to deal with the various activities in education and to relate these to building developments. Learning and teaching are—or should be—the basis of the design of school buildings, and this is the most significant difference between the pre-war and post-war periods.

The Pre-Butler Era. I think it is true to say that the design of schools was dominated by what might be called architectural considerations. The architectural features visually, and architectural principles technically, dictated the design. Both of these are abstractions derived from the study of irrelevant problems arising out of the interest the early Renaissance men took in perspective. They have no particular relation to school building. Thus circulation, the arrangement of corridors by which the teaching spaces were linked, was most carefully considered and the intersection of these received a visual accent. Where the two main traffic routes intersected was the tower, while the entrance hall received a special and often arbitrary architectural treatment. I say arbitrary because the occupants of the building, you will recall, entered and left through the lavatories.

There was one aspect here which is worth considering today. Such a school often had very definite individuality and character. The connoisseur of cinema construction can always tell an Odeon from a Gaumont; in the same way we knew when we were in Kent or Sussex. I doubt if we should know Hertfordshire from Derbyshire today, and a child moving from one to the other would probably see no difference. On the other hand, such

schools could easily be mistaken for convents or minor railway stations from their appearance. Not the least of an achievement since the war has been the development of a building type which can be identified as a school and nothing else.

A great many interesting and able experiments were made in this period—more often in building technique than in planning—and some really notable schools were erected, particularly in West Sussex and Middlesex. Such developments were less effective than they might have been because they were autonomous. A single authority, in carrying out its daily business, could not carry out detailed research into educational techniques and methods, school organization, and so on on which such plans must rely if they are to be positive. The architects carrying out these experiments realized the difficulty of obtaining evidence and information from the educationalists—even if such information was available in a comparative form there was no adequate means of disseminating it, as there is now through the Ministry of Education's bulletins.

The competition for school designs organized by the *News Chronicle* in 1937 was notable in many respects. For the first time, perhaps, the design of school buildings was thought sufficiently interesting to the public to warrant a national newspaper sponsoring a competition. For architects it was important in focusing attention publicly on the requirements of the children and teachers. Most of us who entered it bemused ourselves by working at circulation patterns and found out how little we actually knew about the activities in the classroom and elsewhere. Mr. Denis Clarke Hall won the major award largely by his conception of the classroom as a teaching space, and foreshadowed later developments. But this competition may be taken as illustrating the stage that was reached at this time, and the mere diversity of solutions is evidence of our confusion.

Post-Butler. After the war two factors combined to bring about radical changes in school-building programmes.

First, the Butler Act made the provision of accommodation for secondary education compulsory for all educational authorities. Before that individual authorities only provided such accommodation as each thought necessary and there were wide variations between one authority and another in the numbers of children receiving secondary education. The Act also extended the school age and gave additional educational facilities for both youths and adults. It also required authorities to produce long-term plans for dealing with their problems under the terms of the new Act. By creating new types of school—secondary modern, further education, comprehensive, and so on—attention was directed to educational methods and techniques.

Secondly, the birth rate had increased dramatically and major population movements had occurred, with the consequence that large numbers of additional school places were urgently required.

The effect of this was to revive interest in school design problems and particularly in the provision of teaching spaces by methods which would not impinge too heavily upon the manpower and materials of the building industry. Two committees were established and deserve mention: the Wood Committee, which was set up under the ægis of the Directorate of Post-War Building during the war under the chairmanship of Sir Robert Wood; and secondly, after the war, a working party on School Construction by the Ministry of Education. Both these committees considered the problem largely with the object of treating teaching space economically in terms of labour and materials, and based their recommendations upon the classroom sizes laid down by the regulations. The result of this approach is to consider school design as a matter of the construction of rectangular spaces of uniform dimensions. It confines school development to activity with a *series of cells,* rather than to activity in the whole area of the building.

Useful space is the enclosed space—enclosed that is, within four walls; and unenclosed spaces are wasteful, uneconomical and unspecialized. The object of both committees was to reduce or eliminate them and in this they succeeded. Circulation areas were certainly reduced.

Both committees had unconsciously in mind a definite type of plan and design, and thought of a school building as being ideally of one- or at most two-storey construction. In this light an attempt was then made (1945-47) to find a series of standard dimensions and structural units. Several of the larger authorities, facing building programmes of what the papers call "unparalleled magnitude" were extremely interested in the work of these committees. Altogether the way was cleared for a coherent development in planning and structure. The influence of their reports was considerable and some of the buildings they inspired are now in use. The principal architectural effect, apart from the one I have just mentioned, is that they led to more dispersed plans, to a greater separation of the different parts of a school—classrooms, assembly hall, and so on.

Present Conditions. Three factors operate at present in the design of school buildings.

(1) Increasing readiness of local authorities to experiment with new methods of construction and material and to consider their problems against a long-term background. This is partly due to scarcity of orthodox materials and labour and also to the need for speed of construction, particularly in new housing areas.

(2) Experimental attitude towards teaching methods and organization of space. The demands for increased economy in space have stimulated development in this way and forced educationalists to consider space in relation to the frequency and duration of use as well as to specialist requirements in teaching. Hence the conception of space for dual and multiple uses and the demand for flexibility in plan arrangements and construction.

(3) The experience gained in the design and construction of schools in the immediate post-war period. Most authorities are now reaping where they have sown and are beginning to profit by their earlier buildings.

The influence of the Ministry of Education must be mentioned for, by exhortation and example, it has kept people thinking hard. By the publication of its bulletins it disseminates information and experiment in a comparative and coherent form, never achieved by any Ministry controlling building. It is an enormous task and the Ministry has courage and vision.

School Elements. I intend to proceed from the particular to the general and to show, visually as far as possible, how the conception of the use of space within the school is changing, and is affecting the design of schools.

(*a*) *Classroom to Teaching Space.* The most notable development to which almost everything else is correlated is in the conception of the classroom. The immediate post-war idea, shown in the reports I mentioned earlier, is of a room designed for aural instruction only. The blackboard forms the focus of the room, with the teacher's table and cupboards to one side and the desks packed in so as to allow a precise minimum area for access and no more. Because it is intended primarily for blackboard instruction it is well and evenly lit with a combination of side lighting from the main wall windows and clerestory. This conception is slowly disappearing. The classroom is no longer thought of as being only for blackboard teaching but rather for educational activity on the child's part. The blackboard is ceasing to be the focus and the room loses its directional quality.

Other forms of teaching demand different shapes. The lighting, while even, is no longer axial; the room becomes square or L-shaped; its form is only limited by structural considerations. Total enclosure of the space may even be abandoned. All these different forms in themselves shape the plan; clerestory or top lighting rigidly limits the type of plans, while types of classroom which depend on the use of light from two external walls increase the perimeter and again dictate certain plan and structural forms.

(*b*) *Assembly Halls and Large Enclosed Spaces.* A very similar educational attitude is to be found in the evolution of the school hall for the same reasons. Multiplicity and spontaneity of use is leading to informality in the arrangement of space. In earlier halls the auditorium concept is dominant, with a proscenium arch, seating formally arranged and with a form giving good acoustic properties for stage and audience. It is, in fact, a small theatre, intended for assembly, drama and music.

In the later forms, while this type of use must still continue, greater allowance is made for group activities, music and dancing, games and entertainments. The hall is consequently being modified both in shape—the abandonment of the rectangle with one axis longer than the other, in proportion—and by a reduction in height. Above all, the auditorium concept is being broken down. Where a stage is employed it is regarded rather as giving the possibility of dual use simultaneously on two levels.

This brings about alterations in methods of daylighting. The upper part or stage must be lit and all parts of the hall require good light, preferably at lower levels. Hence the elimination of the formal frame of windows and the substitution of comparatively shallow strip lighting. The same occurs in artificial lighting and here the tendency is towards a larger number of fittings of low intensity.

Moreover, the position of the hall in relation to the general organization of the school tends to change. When it was regarded as a formal meeting-place it could be isolated in some position of special importance. When it is in constant informal use it must be closely related to the activities of the school. Perhaps we shall yet see the plan of the Middlesex School of 1909 revived.

(*c*) *Dining Spaces.* This was a new problem after the war, since few schools had included a special space for it. First of all it was regarded as another formal enclosure, its size and shape based upon the number of children using it and the position of the servery hatches. Here economic considerations have somewhat altered the perspective and the use of so much space for a limited period only during the day has forced architects to develop it for other purposes. This again has led to a greater informality of spatial treatment and to less specialization. It is used to give further space to the hall or as additional rooms for general purposes. Lighting is less important here and most

authorities try to give this space a smaller scale and domestic atmosphere.

(*d*) *Circulation and Entrances.* There has been a continuous reduction in the amount of what we call circulation space. In the years before the war this sometimes amounted to 35 per cent of the total area, while it was commonly 30 per cent and over even a few years ago. Various attempts have been made to reduce it or to find some other use for so much area. Two methods may be observed: (1) Dual purpose. By using one side as cloak space or by using it for various forms of educational activity such as modelling or practical work.

(2) By elimination and the use of teaching spaces for circulation. This is a reasonable proposal as the educational curriculum permits simultaneous movement but cannot be regarded as ideal.

At present it is possible to reduce this area to about 12-18 per cent of the total. These reductions in circulation areas have been, I think, successful. They have reduced relative costs and have not reduced the efficiency of the school.

Of the two, the use foreshadowed by the Ministry's own school at Wokingham, where some circulation spaces are turned to practical purposes, appears to be the most promising. Also worth commenting upon is the decline of that traditional feature the ceremonial entrance, designed for use by governors and education officers, but kept securely locked at all other times. This entrance, which was traditionally placed upon the main axis of the assembly hall so as to permit the easy entry of sacerdotal processions led by the Bishop in his mitre, has almost disappeared. Instead the entrance, which usually has doors of the same scale and type as in the rest of the school, leads directly into either the foyer of the hall or into the general circulation of the school. Its height and importance in formal terms have disappeared.

(*e*) *Trends.* Summarizing the tendencies which have appeared in recent plans, the following features can be observed:—

1. Spaces are less specialized in use and tend to be planned for more general use or for a greater number of uses. Instances of this which I have already noted are assembly halls and general teaching spaces which are used, particularly in junior schools, for both theoretical and practical teaching. In secondary schools, too, this division is less sharply accentuated than before.

2. Simplification of specialist rooms. This is not much in evidence but requires serious considerations. Since the war the demands made by specialist subjects upon space—for equipment and storage—have increased and ought to be diminished. If girls are to be taught to cook—evidently necessary since their mothers can't—it is held that every type of cooker should be provided.

3. Reduction in overall areas of schools. Sufficient information has been given by Mr. Marshall on this subject. I would only like to make one comment upon his remarks. The overall area required for educational purposes in relation to the number of children in the school is now all that is defined by the Ministry. This leaves the division of the space to the local educational authority and gives the architect an infinitely greater freedom in planning. With the co-operation of the educationalist it should now be possible for him to experiment in terms of constructional technique with the spatial arrangements and for further advances in school planning.

At the same time we must be alert to see that this overall area is developed for maximum use. This area, measured in terms of space per child, is not large; ingenuity of arrangement which offers a lower area per child is often a specious advantage.

4. I should like also to make a plea for the reduction in size of school units. I do not think this need necessarily be achieved by smaller schools but by breaking down larger schools, if you like, into smaller self-contained groups. In this connection the house system developed in public schools and being adopted for State ones in comprehensive schools has great possibilities. I would like to see this system, by which theoretical teaching spaces, dining-rooms and so on are grouped in distinct and separate units, extended to all schools of 480 children and over.

5. A great deal of thought is being given to the arrangement and relation of spaces required for specialist teaching. Two approaches to the problem can be distinguished, one laying emphasis on the technical aspects and the other upon the educational. In the first case the aim is to group all the teaching spaces requiring special services into one group which is made as compact as possible. The laboratories or workshops requiring extra gas, water or electricity are grouped and the cost of the provision of such services is reduced. In the second approach technical and economic considerations are not allowed to dictate either the disposition of these spaces in relation to the rest of the school or the form and grouping of these spaces. In this way workshops for metal or wood may or may not be grouped according to the educational pattern.

6. A further and quite consistent development of what may be called the "technical" approach to school design can be seen in some recent schemes. In these the architect has considered the problem primarily for economic space enclosure. This is an extremely interesting and valuable approach; a school is seen as a building with definite requirements of lighting, services and of fairly rigid space dimensions. This approach certainly would seem to lead to a high degree of economy since external perimeter walls, floors and roofs, etc., are reduced to a minimum in area and length. It may lead logically to spaces exclusively top lit, or lit by clerestory as in the American example. It may be contrasted with the opposite extreme—the practical rooms at the Ministry of Education's own school at Wokingham where educational requirements have led to the development of a looser arrangement of space.

Effect upon design. I have dealt with the principal elements in a school building which go to make up the plan. But as I have already said, a school is not the addition of a number of separate units, however excellent in themselves. A successful school building is one in which all the various spatial elements are related to the educational pattern. It is the whole plan, the whole design; a modification in the use of the classroom or teaching space will eventually lead to changes in the whole design. For the sake of clarity I have grouped these changes under two headings: (1) Changes in planning technique;

(2) Changes in formal elements—design.

(1) *Changes in Planning Technique.* The most notable change that has occurred since the war has been a continuous reduction in the overall spread of a school. What Professor Sir W. G. Holford, in another context, has called the plot ratio has sharply diminished. By reducing the extent of the perimeter walling, by the concentration of space within a minimum site cover, cost of building and services can be diminished. Mr. Clarke Hall has shown this dramatically in a diagram he showed recently.

This concentration has come about by the reduction of areas devoted primarily to circulation as well as by the adoption of multi-storey buildings—3 and 4 and higher for secondaries, up to two for primaries. It has been found possible to achieve this concentration by the extended use of clerestory and top lighting and, in the case of higher blocks, by lighting from two sides.

I expect to see these tendencies carried a good deal further yet. Concentration of space in recent plans has been achieved often without a reduction in the length of perimeter walls. I believe that a further reduction in cost and space may yet be achieved without the sacrifice of any amenity.

(2) *Formal Elements.* I have come at last to what we all as architects, wish to achieve; good design for our buildings. The changes in technique I have noticed must have a considerable effect upon our attitude to design. It is no use our sitting back and thinking that the methods that achieved certain results in the past will also be valid if those methods are abandoned and others substituted. We do not have the same values and qualities at our disposal to-day and we must exploit different ones. While a very high level of planning and structural technique has been achieved to-day and was to be seen at the exhibition held at the Building Centre in February this year, the formal design of school buildings has not yet achieved the same high level. We have not yet exploited to the full the opportunities that are implicit because we do not always clearly recognize what these are.

Let me give a few instances of what I mean. If we are to make the fullest use of daylight by means of top lighting and clerestories, in order to achieve a greater concentration of space, we must abandon our traditional concepts of mass. London University, the Cathedral at Canterbury, obtain part of their effect by contrasts of mass; the tower of the university rises above the predominantly horizontal linear pattern of Bloomsbury. The towers of the Cathedral dominate and contrast with the not inconsiderable mass of the nave. This is a result which it is not possible to achieve if the main element in a school building is the glazed clerestory rising above the flat roofs surrounding it. Three dimensional ideas on the composition of mass will not help. We must learn to exploit the value of line—by the delineation of roofs and eaves and pattern by wall and glazing treatment. In the example I have chosen for illustration the designer has recognized this and emphasized it by colour.

Georgian precedents—the use of string courses in contrasting materials, stone with brick—give us a clue to the solution of this problem.

Another example lies in the elimination of the wall as a supporting element. In practically all school buildings to-day the roof and floor loads are supported on a frame of some sort and the wall becomes a weather excluding skin, opaque or translucent as required. It is, therefore, useless to seek the same effects as were achieved when the interplay of solid and void in wall and window could be organized for proportion and pattern. Again, what can be achieved is use of line, the superimposition of the patterns inherent in glazing units and their expression. The blank window, without scale or interest, will achieve nothing. Architects have achieved much when this is recognized. In this school* of Yorke, Rosenberg and Mardall,

* *Victoria Road Secondary School, Eastcote, Middlesex.*

the whole interest of the façade is concentrated on the expression of the opening units.

Another instance also arises out of the wall. The use of large-scale prefabricated panels usually means a loss of texture, though not necessarily a loss of pattern. No material has yet achieved the range or permanence of texture of brick or stone. But this can now only be obtained in rare cases and we must substitute the use of pattern where slabs are employed or embossed pattern in sheets, or where neither of these exist emphasis in the use of colour. I believe a part of the revival of interest in colour to-day comes from a realization of this fact.

I have referred already to what might be called the 'technical' approach to school design. The effect of a rigid and rigorous concentration on such aspects is to eliminate any smaller breaks or changes in the design—say from two to one storey—and to bring such limitations, even at some loss of convenience, into the larger frame of the whole school. Such examples as can yet be found of this approach make for a building of great formal interest. It is impossible not to admire the logical consistency of this approach even though one may doubt if it does not go too far in one direction—in giving a mechanistic expression to educational design.

This is an extremely important aspect—one which is bound to be of vital importance to us to-day, forced as we are, by economic circumstances to increases in costs or reduced areas. It is one I think the Conference should consider.

Conclusion. The development of the school building programme since the war makes a very interesting study in architectural evolution in terms of social change. It is true that the scale is small and the perspective short, but I think it will be admitted that a comparatively small social change has already produced architectural consequences of some importance. A new pattern of education (the social change) has a direct effect upon the use of space in school buildings, and this has affected the spatial considerations and the plan; in their turn, changes in plan have been achieved by the exploitation of constructional techniques. The full expression of these technical changes is leading us to rethink our ideas and concepts of design.

School design is probably the most vital and experimental field in architecture to-day. The empiric approach, engendered by the Ministry, has percolated through to us all and I think the results being obtained will rank with those of any country. I believe in school building we already lead the world.

HOW THE LOCAL AUTHORITY WORKS

By C. H. ASLIN, C.B.E., Vice-President R.I.B.A.: County Architect of Hertfordshire

THE title obviously suggests a very prosaic paper, and I would state at once that I do not propose to deal with it by a catalogue of various happenings in the daily life of an official architect. On the other hand, I propose to take the opportunity to deal generally with the subject, and to cover as wide a range as possible, in the hope that discussion may be stimulated.

The Beginnings of Official Architects. In later years the official architect has come to be accepted as a normal part of the profession, but even quite a few years ago he was looked upon as something quite peculiar as compared with his brother, the private practitioner, who was regarded as the normal and established unit. This view, however, was quite erroneous, because through the long line of architects, known and unknown, since the days of Egypt and Greece, through the Roman Empire, the medieval period and the Renaissance, architects have obviously been remunerated for their labours in a variety of ways—in some cases by wealthy patrons, and in others by the State or Church; and their work has been judged by their contemporaries and by posterity on its merits and as works of art, without any regard for the way in which they were paid for doing it.

It is interesting to note that there was a Surveyor or Controller of the King's Works as early as Edward I, and the first official architect in this country who carried out works on a large scale was no less a person than Inigo Jones, who was Surveyor to the King from 1615 to 1648. From 1705 to 1718 the office of the Surveyor was occupied by Sir Christopher Wren, and among the names of other distinguished architects who held office under the Crown are those of Hawksmoor, Colin Campbell, William Kent, Robert Adam, Sir William Chambers, Sir James Pennethorne and Sir Robert Smirke. Whatever the individual capabilities of the modern official architect may be, he can at least claim the distinction of following a company of very eminent members of the profession.

At the beginning of this century the official architect was looked upon as something new and rather peculiar because we were entering a new phase of development, and the official architect is the product of the changing time which has been so evident in the last fifty years. In the 19th century, so strongly marked by individualism in trade and every other enterprise, he would have been an impossible anachronism. At the present time, in a world of Government control and social service, of municipal enterprise and great industrial combines, the official architect has grown naturally out of this shape of controlled undertakings, so different from the individualistic world of the 19th century.

Development of Local Authority Work in the Last Fifty Years. At the beginning of the century there were very few local authorities who employed architects in their service at a salary. The reason for this was, of course, that the field of operations of a county or borough was very limited, and a very high proportion of building was undertaken by private enterprise, which naturally looked to the practising architect as its adviser. Since the end of the first great war, however, more and more work has become the responsibility of national and local government. This trend started with the municipal housing of 1919, and having set up architectural departments local authorities naturally employed their architects to carry out other work such as municipal offices, markets, baths, bus stations, and indeed every kind of building for all the enterprises for which local authorities became responsible.

This burden of work placed on local authorities reached a peak with the 1944 Education Act. The buildings necessary to satisfy this measure are costing about £53,000,000 a year, so that with the limitation of expenditure on private enterprise and the large sums being spent by the central government on defence, the local governments throughout the country are now spending a very high proportion of the total expenditure on building. In other words, the whole pattern has changed and completely reversed since 1914, and we shall examine later how this change is likely to affect the whole profession.

Control of Expenditure. It is sometimes thought that because the official architect deals with public money he is likely to be much more extravagant than the private architect dealing with a personal client. This idea, however, is quite erroneous. The capital amount for any project is approved by the local authority which is to spend it, and furthermore, the same approval must be forthcoming from the Government department which is sponsoring the project and providing some proportion of the cost. The capital cost of the project having been approved by both these authorities, the architect cannot spend any more than this figure without a precise approval. While the work is in progress he is subject to the scrutiny of one of his colleagues, the local government accountant. Final accounts for payment are also vetted in the same way, and in due course the whole of the accounts are scrutinized by the Government auditor. In other words, the greatest possible precautions are taken to see that public money, whether raised by taxes or local rates, is expended as wisely as possible. This method is governed by a series of Standing Orders, and a considerable part of the official architect's time is taken up by satisfying these rules, which are designed to protect the public which pays.

In recent years there have been many private architects who have learned by experience of this form of financial control; the reason being that public offices have had such a large programme to carry out that it has been necessary to enlist the services of private offices in order to cover the demand. In some cases work has been entrusted to private practitioners just in the same way that it would be handed to them by a private client, but in more cases still the work has been handed out and executed by way of collaboration between the private architect and the official. There appear to be many advantages in this system. In the first place, in order to carry out all the programme, many official offices would have to be increased in strength enormously, and when the work decreased—as it inevitably will some day—we should have the spectacle of assistant architects being dismissed, with inevitable distress. The second important consideration is that, with the shortage of normal work for private offices, it is difficult to see how they could possibly keep going without sharing some of the Government-sponsored work which is normally carried out by the official architect; and it will undoubtedly be disastrous for the profession, if and when work sponsored by private enterprise is available, if there are insuffi-

cient competent private architects to carry it out. This collaboration is, therefore, not only necessary to do the official work now required, but it is, in my opinion, essential to keep the whole profession on an even keel.

The Effect on the Profession of Enlarged Public Offices. At the beginning of this century the pattern of the profession seemed to be rigidly fixed. Most people entered the profession through articles in a private office; relatively few bothered to take examinations, and the profession was, generally speaking, divided into two parts; first, those who had the good fortune to belong to a family practice, or had parents with enough money to buy a junior partnership; and the others who were architects' assistants and were never qualified except by practice.

The whole pattern is now completely changed. The profession is much larger in numbers; all are qualified of necessity, and owing to the conditions left by the war greater numbers than ever are employed in local government offices, and there is conversely less opportunity of starting a private practice. The post-war conditions have created large offices in which practically every member of the staff is a fully qualified architect, and the set-up is quite a different one from that which obtained when staff generally were unqualified and content to act as assistants to the head or heads of the firm.

This, therefore, in my opinion, suggests an entirely different pattern of working. The old method of designing at the top and passing the work down the office, so that drawings may be done at the direction of the Chief, does not produce the best results. This is due to the fact that the qualified architect is not fully used to the capacity of which he is capable. The pattern to seek, therefore, is one in which the assistant architect is given charge of the project from the sketch plan stage. It might be said that this method is bound to produce a varied quality of work from the office, because naturally the skill of each individual member is a varying factor. On the other hand, the friendly rivalry which this method creates stimulates the individuals, and causes the general standard of the work in the office to be much improved; such standard being inevitably much higher than that which can be produced by the pyramidal office.

The group system is one which, in my opinion, produces the best results, and is worked in the following manner. Let us assume that we have a group of architects of a size necessary to carry out a particular programme. One member of the group will assume responsibility for the design of the first project, and the other members will act as assistants. The second member of the group will take on the next project, and all the other members, including the first, will assist him in the same way. This pattern is repeated until all the members of the group have a project for which they are responsible, so that each architect in turn is responsible for a scheme with the assistance of all the others, and alternatively becomes an assistant himself to the other members of the team.

This method, of course, means that each member of the staff gets an opportunity of acting in his proper capacity as a fully qualified architect, and consequently he both deserves, and is justified in expecting, higher pay than would formerly have been given to an assistant doing hack work. The size of the group in which this method can be successful should not be greater than 10 members, and another necessity for ease of working is that the jobs should be relatively small, say about £50,000 each, of similar character; it will also be clear that they must be continuous.

Precisely the same method is a little more difficult to work with larger projects, such as secondary schools, which will average somewhere between £150,000 and £200,000 each, but on the other hand this method can be made to work with varied projects—that is, varied both in type and size; and much better results can be obtained by giving the qualified architect, of whatever age and experience, the opportunity to exercise to the full the profession for which he has been trained.

This matter is one of the greatest importance to the profession, because it would obviously be wasteful to train fully qualified architects and then never to use them for the work which they are capable of performing.

This also raises the question of remuneration, and it appears to be quite clear that the group leader should be paid at a rate more in conformity with his ability and responsibility than was thought to be proper in the past, when he acted as a hack worker to the Chief.

This problem is, of course, also tied up to the actual cost of the architect's services, as there is obviously a limit to what can be paid without the cost of the service to the client, viz., the local authority, being higher than a reasonable charge based on the R.I.B.A. scales. This brings me to another point, which has proved to be a contentious one amongst local authority architects, and that is the necessity of keeping cost records; and it cannot be too strongly stressed that cost in local government means precisely the same as it does in a private office. In other words, everything is charged against the office—and everything means salaries, rent, lighting, heating, materials, telephones, transport, and a charge from the clerk and the accountant for the services such departments render to the architect. Costing is essential for two reasons. From the employing authority's point of view it is necessary to show that the office is being run with reasonable economy, and from the chief architect's angle a simple costing system is capable of locating various groups in the office which are doing less well than others; and steps can, therefore, be taken to put the matter right. Otherwise, in a large office, it is possible to have groups working uneconomically, and this deficiency might go on for years without being located.

The whole subject of official architecture needs very careful consideration, because it is at this moment providing, and will continue to provide, a very high proportion of architectural work, and it is essential in the interests of architecture and the profession as a whole that it should be of the best possible quality.

COLLABORATION BETWEEN OFFICIAL & PRIVATE ARCHITECTS

By S. H. LOWETH, F.S.A., F.R.I.B.A., County Architect, Kent

MY attention was first directed to the post-war building problems when, during the war, I was invited by the Ministry of Information to write an article on that subject for publication in the U.S.A., which was followed afterwards by a request for a series of similar articles for a journal in this country.

In considering these problems, a survey was made of all the then known factors, helped in no small measure by a knowledge of what happened after the 1914-1918 war and of the crises between the wars when building programmes were suddenly developed and as quickly cut.

From these surveys, the following points emerged :—

(*a*) That as no schools, dwelling-houses and commercial buildings (other than those required in connection with the war) had been erected since 1940, and the reinstatement of war damage would have to be tackled, the Government would be compelled to embark upon the biggest building programme in the history of the country.

(*b*) That this programme would begin immediately after the cessation of hostilities in order to provide work for those returning from the Services and expand rapidly in the immediate post-war years.

(*c*) That for some years there would be a shortage of staff in the architectural and allied professions to deal with this work because : (i) Many of those in the Forces were serving in technical units and would, therefore, be amongst the last to be released; (ii) Only a limited number of persons would have qualified for these professions during the war.

(*d*) That this shortage of staff would mean the development of competition for their services between employers, resulting in staff continually leaving one job for another, an inflationary increase in salaries, difficulties in office organization and consequent delay in carrying out the programme.

(*e*) That in the employment of staff, the housing factor would play a very important part.

(*f*) That many materials required for building, particularly timber and steel, would be scarce and this would force the Government to exercise some form of control and rationing.

In the light of these considerations, a local authority such as Kent had to decide whether to expand its Buildings Department or to employ firms of private architects to carry out some of the work. Bearing in mind that in the years 1931-32 the County Council had successfully employed a panel of twelve firms of private architects to deal with a large building programme, they did not hesitate to adopt the same course in 1945. The permanent staff, therefore, remained at approximately its pre-war establishment and firms of private architects, consulting engineers and quantity surveyors working in collaboration with me were employed to deal with any work which the permanent staff could not absorb.

The main advantages of this arrangement are :—

(1) It is possible to increase instantly the output of work by employing as many private firms as may be required so that no delay occurs, a particularly important point having regard to the post-war practice of Government Departments of awarding a starting date for each project.

(2) It produces a greater variety of solutions of similar problems and therefore buildings of greater interest.
(3) It saves time and expense in advertising for and obtaining additional permanent or temporary staff.
(4) It saves the cost of providing additional office accommodation, furniture and equipment.
(5) It would avoid a reduction of permanent staff by the authority should there be serious cuts in the building programme, but only at the expense of the private architects. The extent to which they would then be employed would depend upon the severity of the cut in the building programme.
(6) It would take advantage of the "bonus" or profit-sharing system under which many private architects run their offices, thus shortening the period for the production of drawings.

When the policy of employing private architects instead of the inflation of official staffs was advocated to a body of official architects, it met with strong criticism by some, in spite of the fact that the then President of the R.I.B.A., Sir Lancelot Keay (himself an official architect) had strongly supported it. It soon became apparent, however, that many of these critics had not fully appreciated the magnitude of the task before them and the difficulties with which they were confronted owing to post-war conditions. Later, many of those who criticized came to realize that supplementing the work of the permanent staff by the employment of architects in private practice was the best solution to the problem of: (*a*) carrying out a large programme in the limited time available; (*b*) surmounting the difficulty of securing technical staff with the qualifications and experience required, and (*c*) preventing the salaries of the whole of the permanent staff becoming unduly inflated, and these former critics advised their own authorities to adopt the same policy.

That this policy has been successful in Kent is shown by the fact that the Council has been completing on an average one new school every three and a half weeks for the last four years. It is believed to be the first authority to sign up its hundredth new school contract since the war. In addition to this, many other new buildings and alterations and additions to existing buildings, reinstatement of war damage, etc., have been carried out. By employing private architects (in association with its own surveying and architectural staff) the County Architect's Department was able to prepare, within a comparatively short space of time, a complete record—of plans, sites and technical reports—of every school in the county (nearly 900 in all), a work for which it was commended by the Ministry of Education. If the work had had to be done entirely by the Department's own depleted staff it would have taken much longer.

The success of this policy has only been achieved with the whole-hearted co-operation of the private architects and close collaboration with them, both on the administrative and technical sides. The organization and method of establishing such collaboration is as follows:—

Administrative

Co-ordinating Officers. To correlate the work of private architects to ensure that they are all working to similar standards, senior officers of the County Architect's Department have been appointed as co-ordinating officers under the following heads:—(1) Architectural (*a*) schools, (*b*) other county buildings. (2) Sites. (3) Engineering. (4) Administrative. These senior officers also co-ordinate the work of the private architects with that undertaken by firms of consulting engineers and quantity surveyors employed by the Council. There is, in fact, a complete organization to deal expeditiously with all "outside helpers" and any mistakes or omissions which may be made with any one firm are speedily corrected with all the rest.

Duties of Private Architects. The private architects are not required to undertake the whole of the duties normally performed by private architects. Table A shows, in summarized form, the work the private architects have generally to undertake vis-à-vis the R.I.B.A.

Private architects are not required to attend at either Council or Committee meetings. These are attended by either the County Architect, his deputy and/or his senior assistants who are answerable for the scheme. Private architects are, however, requested on occasions to attend staff meetings when representatives of other departments are present.

Guidance of Private Architects. The very greatest care is taken at the start in the briefing of the private architect, as it is felt that by so doing a good deal of time and effort is saved. To this end, the private architect is furnished with typed lists of all the accommodation required (at all stages of the job) and only on rare occasions are these conditions altered during the progress of the job. A record of work either abandoned or deferred, including cost, is kept for reference by the Chairman of the County Buildings Committee.

The County Architect has issued very full notes for the guidance of private architects, of which details are given under various headings later in this article. Apart from these notes, information circulars are issued periodically to private architects giving particulars of Government Departmental memoranda on materials for various purposes, substitutes and lists of recommended proprietary materials of various kinds, together with names and addresses of manufacturers. Useful notes are added on authorizations for steel and timber and on a great variety of points relating to construction, finishings, equipment and so on.

A section of the County Architect's Department keeps an up-to-date map of brickfields and their stocks. Sample brick walls have been erected at the head office at Maidstone for the benefit of the private architects who may not be familiar with the local varieties and sources of supply. A record is also kept of new materials, specimens of which are on view in the "sample room."

Estimate of Cost of Works. The estimated cost of the project for which the private architect is employed is prepared by him, with the exception of the estimates in respect of electrical installation (including cable), heating and hot and cold water services, and structural work, which he obtains from the consulting engineers. Such estimate is then forwarded to the County Architect, who computes the incidental expenses, comprising the fees of the private architect, consulting engineers and quantity surveyor, the salary of the clerk of works, the cost of printing bills of quantities and adds such expenses to the figure submitted by the private architect and then informs him of the total cost of the works.

Specification (Building Works). The private architect is required to prepare and furnish to the quantity surveyor an outline specification giving sufficient particulars of the construction of the building, the materials to be used and the schedules of doors, windows and general finishings to enable a full specification to be prepared by the quantity surveyor. The quantity surveyor submits the draft specification to the private architect for his approval or amendment as the case may be.

TABLE A

Work as Required by Clause 2(*a*) of the R.I.B.A. Scale	Work as Required by the Kent County Council
1. Taking the client's instructions.	No—dealt with the the County Architect.
2. Preparing site and levels plan, etc.	No—Generally prepared by Buildings Department.
3. Preparing sketch design.	Prepared either by the private architect or the Buildings Department.
4. Making approximate estimate of cost by cubic measurement or otherwise.	
5. Preparing drawings and specifications for the purpose of obtaining tenders.	(*a*) Preparing working drawings. (*b*) The specification for the building works is prepared by the quantity surveyor, but to enable him to do so, the private architect is required to furnish him with brief notes regarding the construction of the building and the materials to be used, together with schedules of doors, windows and general finishings. (*c*) Preparing the technical portion of specifications in connection with prime cost items and provisional sums.
6. Advising on tenders and preparation of contract.	No. Dealt with by County Architect.
7. Selecting and instructing consultants (if any).	No. Dealt with by County Architect.
8. Furnishing to the contractor two copies of the contract drawings and specification and such further details as are necessary for the proper carrying out of the works.	Yes, but it should be noted that the specification does not form part of the contract.
9. General supervision.	Yes.
10. Issuing certificates for payments.	No. Certificates are issued by the County Architect on the recommendation of the quantity surveyor.
11. Passing and certifying accounts.	No. The variation account is prepared by the quantity surveyor and it is certified by the County Architect.

Quotations from Specialist Firms. The private architect is required to prepare the technical portion of specifications for specialist works, materials or goods for which prime costs or provisional sums will be inserted in the bills of quantities. He is supplied with copies of the Council's Standard Forms of Tender and General Conditions and Preliminaries applicable to (*a*) specialist sub-contractors and (*b*) specialist suppliers. Competitive quotations are obtained by the private architect

A Window in Kensington

BY EDWIN LA DELL

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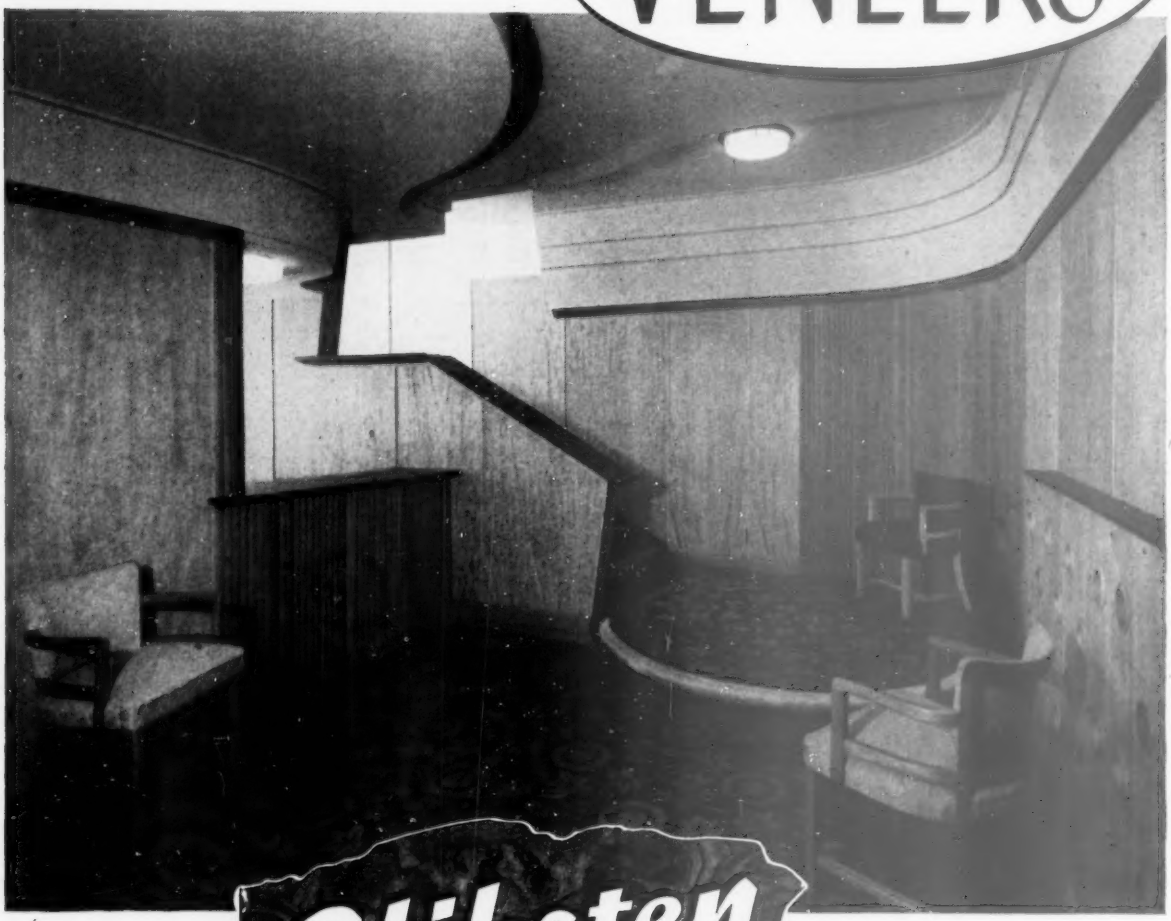

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from not less than three specialist firms, selected when possible from the Council's approved list of specialist sub-contractors, a copy of which is supplied to the private architect. He examines the quotations obtained and submits them to the County Architect with a report thereon. The County Architect then gives approval or otherwise to the inclusion of a prime cost or provisional sum in the bills of quantities based upon the amount of the quotation recommended.

Consulting Engineers. The Kent County Council have entered into contracts with consulting engineers in connection with heating, ventilating, domestic, mechanical, electrical and structural engineering works, thus forming a panel of consultants. A copy of the letter of appointment which the County Architect sends to the consulting engineer (for each job for which he is employed) is sent to the private architect at an early stage, so that he knows who the consulting engineer is and what he has been instructed to do.

Under the terms of his contract with the Council, the consulting engineer is responsible for the design, supervision and proper execution of the engineering works for which he is employed. The private architect is required to supply to the consulting engineer such drawings and information as he may require to enable him to advise the Council in relation to engineering works. There must, therefore, be proper collaboration between the private architect and the consulting engineer on technical matters affecting the work for which they are each responsible. There should be an interchange between the County Architect and the private architect of copies of any communications which they respectively send to the consulting engineer.

Quantity Surveyors. The Kent County Council entered into contracts with and formed a panel of quantity surveyors. A copy of a letter which the County Architect sends to the quantity surveyor instructing him to take out and prepare bills of quantities and to prepare the specification is sent to the private architect at an early stage of the job.

A copy of the following documents which have to be supplied to the quantity surveyor in respect of each job is sent to the private architect for completion or amendment, as may be appropriate in relation to the works to be executed:—

(i) Form and Conditions of Tender and form and Conditions of Contract.
(ii) Standard General Conditions and Preliminaries to be inserted in Bill No. 1 of the quantities.
(iii) Standard clauses to be inserted in the general summary of the bills.

The letter of instruction sent to the quantity surveyor informs him that he will be furnished with the following documents by the private architect: (*a*) working drawings; (*b*) an outline specification; (*c*) a copy of each of the quotations in respect of which prime cost or provisional sums are to be inserted in the bills, together with a copy of the specification and drawings (if any) upon which such quotations were based.

Building Contracts. The building contract is entered into by the County Council and for this purpose the private architect supplies to the County Architect two sets of eighth-scale working drawings, including the site plan. As soon as, in the opinion of the private architect, the whole of the works are completed or any part or section of the works is both completed and taken into use, he notifies the County Architect of the date thereof. The County Architect then issues a certificate of completion or partial completion to the contractor.

Variations of the Building Contract. The private architect has no authority to issue variation orders. He informs the County Architect of any variation in the works which in his opinion are necessary or desirable and then submits particulars on a draft variation order. The estimated cost of such variations is shown on the draft order. If the County Architect approves such variations he issues a variation order to the contractor. Particular importance is attached to these orders and to make sure that all concerned receive a copy the orders are printed in booklet form (five sheets) for the contractor, quantity surveyor or consulting engineer, private architect, head of architectural section and office file copy. The office copy shows the financial position. Only variation orders on these forms are acknowledged and paid for and they must appear in the variation account in numerical order. Complete financial control is thus obtained over every job.

Clerks of Works. A copy of the letter written by the County Architect appointing the clerk of works, together with a copy of the instructions issued to him with such letter, is sent to the private architect. The clerk of works is under the control of the County Architect but works in collaboration with the private architect. At the end of each week the clerk of works submits a report in standard form to the private architect, who takes such action thereon as may be appropriate and forwards the report to the County Architect.

Technical

Documents to be Furnished with Instructions to Private Architects to Prepare Schemes. When he is given instructions to prepare the scheme the private architect is furnished with the following information when applicable:—

(*a*) An extract from the ordnance survey showing the site, together with levels, services, etc., with an indication of the suggested siting of the buildings.
(*b*) A detailed schedule of the accommodation required (at all stages).
(*c*) A chart showing "target" dates to be aimed at.
(*d*) A schedule of cooking equipment, etc., which will be installed.

Trial Holes. When necessary, arrangements are made by the private architect with the County Architect for a builder to dig and protect with fencing the number of trial holes which the private architect considers to be necessary. Private architects are required to submit to the County Architect a technical report and dimension diagram on the nature of the soil and subsoil and the levels of water (if any) disclosed by the trial holes.

Stages of Preparation of Schemes. The first stage is the preparation of single line sketch plans to 1/500th or 1/16th in scales as a basis for discussion with the head of the Department concerned. A very brief report is required describing the planning of the building in relation to site or other problems, with an indication of the type of construction to be adopted, to be submitted with the plans. This is accompanied by the usual statement in regard to floor areas, cost per place and forecast of the cost of the whole scheme. On receiving formal approval to sketch plans, working drawings are proceeded with.

While working drawings are in hand, every opportunity is taken for full consultation with the Fire Officers in relation to fire precautions necessary and also with officers of the Education Committee in regard to layouts of fittings, etc., in specialist rooms.

Planning and Construction of Schools. The private architects are naturally advised to consult the Ministry regulations and Bulletins prescribing standards for school premises. In addition to this, full notes on planning of schools (commonly known as "the blue book" or "the bible"!) have been prepared in an endeavour to convey to the architect and engineers general principles and standards required by the Education Committee.

The type of construction is left to the private architects, but they are urged to bear in mind the essential needs of economy, both in the use of materials, finishings and amount of steel.

The overall essential, as we all know, is economy in planning.

Visits. Private architects are encouraged to visit each other's projects and, needless to say, I am only too ready to arrange for visits to projects carried out by my Department.

Staff Conferences. Staff conferences are held periodically with all principal officers in the Department and any information arising out of these conferences, particularly in regard to maintenance, suitability or otherwise of materials used, are passed on to private architects for information.

In conclusion, Mr. Chairman, may I quote an extract from a letter of Sir Lancelot Keay, himself a most distinguished official architect, written and published in *The Builder* of February 27, 1948, when Sir Lancelot was President of the R.I.B.A.:—

> ". . . the policy . . . of employing private architects is that advocated by the Council of the Royal Institute, as set out in the memorandum entitled 'The Employment of the Architect on Public Work' and published in the R.I.B.A. *Journal* in September, 1945 . . . which memorandum was drawn up by a small committee under the chairmanship of Sir Percy Thomas, on which were represented equally architects in private practice and architects holding official appointments.
>
> ". . . if this practice of using the services of private architects is more widely followed, I am convinced that both architecture and architects will benefit."

Those words of wisdom, Mr. Chairman, were uttered in the very early days of the great post-war building programme and I feel sure that if Sir Lancelot's advice *had* been more widely followed, a great amount of hutment and mass-produced "jelly-mould" architecture would have been obviated. Considerable advantage would thus have been gained by tapping the greatest pool of talent and experience, and much more of the country's education building programme would have been completed when building costs were at a far lower level than they are to-day.

Even now, I still receive enquiries from official architects and authorities who are beginning to appreciate the many advantages of employing private architects and I hope, therefore, that these papers and the ensuing discussions will have the effect of encouraging more local authorities to adopt this policy.

[*Papers continued overleaf*

THE PRIVATE ARCHITECT'S PROBLEMS

By F. R. S. YORKE, F.R.I.B.A.

WHEN I was first told my talk would be about the private architect's problems, I assumed that it would be entirely to do with schools, and that made it very difficult to think up enough problems to make a paper. But in subsequent discussion with the other speakers it became clear that the subject could be extended to cover the private architect's problems generally, and this I take it means his struggle for existence. Here it is easier to see what the problems are. So I propose to deal separately with schools, and to deal with them first.

In order to get the problems into the open, we can take a typical school and follow it through all its stages from the time of briefing. In this way other people's problems may come to light in the discussion.

Generally, the private architect has to work for a number of different authorities, all of whom have slightly varying requirements and several methods of approach to their own problem of dealing with the private architect. For instance, we may find in one authority a section of the architect's department whose sole job is to deal with outside architects, whilst in another we are briefed by the education officer and have scarcely any contact with the architect, and in a third there is no organization at all. This is not a very serious thing, although when one works a second time for the same authority, knowing the drill, it is noticeable that the whole procedure is simplified and speeded up.

Working for a public authority is on the whole rather less arduous than working for a private client; this is noticeable from the first briefing. Taking the school again as an example, there is a great advantage in that the local authority's representative who deals with the briefing knows what the requirements are, and there is very little going back on the original programme (excepting that different authorities have different ideas on the way to calculate the number of w.c.s). He is not a layman in the same sense as the private client, who has no building tradition and needs a lot of help in clarifying his ideas. And of course he is not spending his own money, which all makes a difference. At the time of briefing the permitted expenditure for a given school is known and from this the number of square feet that can be allowed per child can easily be calculated.

Now we come to the first real problem from the point of view of the Ministry. The architect is briefed as soon as the education authority has been informed that a particular school is in a particular year's programme; and this may be the case for the official architect, but quite often the private architect is not briefed until some time later, when the panic has set in. This may mean that unless sketch designs are approved at the first submission, the time left between commencement of working drawings and official starting date is too short for drawings to be completed before the quantity surveyor gets them, and so there may be variation orders throughout the whole course of the job.

It normally takes a year from the time of briefing to the commencement of work on the site, or more in the case of a technical college, where much more detail has to be approved by the H.M.I. and the heads of departments. From the time that the programme is known, and on the assumption that the site has been surveyed and there are no complications with services, it will take approximately six weeks before preliminary sketch designs are ready for approval by the architect or education officer, and a further four weeks for presentation to the education committee. Part of this time is really wasted because it is impossible to arrange a meeting to coincide with the completion of the drawings. During this time there are informal discussions with the Ministry and with the client. A little more time may be taken if a particular authority finds it difficult to accept new ideas in planning that follow from the need to economize in circulation space. It is quite possible that a kind of planning that is becoming common in one area and is approved by the Ministry may appear as wildly retrogressive in another.

One of the factors over which the architect has no control is the timing of arrival of new jobs in the office, and the date on which a start can be made on working drawings.

For a school costing around £200,000, five or six assistant architects with additional junior help will be required at the working drawings stage, and one of the most difficult problems is to maintain a staff that is capable of taking the impact without becoming disorganized. It is particularly difficult when one realizes that staff must be kept productively employed for the whole of the year, and that if one is to maintain a high standard of work there can be no question of taking on people for a particular job and dismissing them when the rush is over. The situation is eased, of course, if the office concerned has some large work of a long-term kind, but the problem is a serious one and worth discussing as there may be some solution to it.

The senior assistant on a job of this size will stay with it for two or three years, and will see it through to completion, but as soon as the working drawings are finished four or five people will have completed their part of the work and will be free, and if several jobs happen to arrive at the same stage at the same time—and this is sometimes unavoidable—there may be as many as fifteen people looking for a job at working drawing stage.

Another problem is that of paying salaries high enough to relate to the high cost of living. Although building costs have risen roughly three times, salaries have risen to barely twice what they were before the war. This may be due partly to high taxation, which forces a principal to take out more than he might otherwise do in order to create a little reserve, about which I will say more later on. But I think it is also because the materials with which we build now are relatively cheaper than those we used formerly, but at the same time they need much more thought and careful detailing, and an enormous amount of office work goes into the keeping down of building costs. It is not unusual to re-detail extensively in alternative construction, to escape a rise in price or to avoid a scarce material. So it seems that without an increase in the scale percentage the architect will be relatively poorly paid, and if the assistant in the private office is underpaid this will reflect in the salaries of assistants of official architects.

In the last few years we have had to face the problem of increasing costs of building in the interval between completion of sketch plans and original estimate, and the date of receiving tenders. Table B here gives a clear picture of what could happen at such a time, and when the Ministry insists that the starting price shall not exceed the estimate, in spite of the rising costs, there can be an enormous amount of work in redesigning to cut the lowest tender price by 10 per cent. Once the work is under way prices continue to rise, but the client naturally likes to pay no more than is in the bill of quantities. Some authorities allow a rise provided it is due to increased costs and is reported and explained, others will allow no rise, and others again take it from contingencies. In any case there is continual work throughout the progress of the job in checking prices and comparing them with prices at the date of tender, and so one goes on substituting and re-detailing.

TABLE B showing School Job Saga :

		Prices (Jan. 1949 = 100)
Briefed	May 1950	101.29
Provisional sketch design submitted	30 June 1950	—
1/16in. plans with estimate on SB.22	11 Jan. 1951	106.47
Working drawings begun	5 April 1951	—
Sketch designs finally approved but with minor reservations	4 May 1951	—
1/16in. plans resubmitted	11 July 1951	119.90
Final estimate on SB. 16 sent in with completed working drawings	28 Sept. 1951	121.41
Out of tender	End of Dec. 1951	121.70
Tenders received	14 Feb. 1952	127.97
Savings demanded	—	—
Savings made and SB. 16 resubmitted	11 June 1952	—
Official starting date	25 Aug. 1952	125.00

By the time that the contract is signed and building has commenced there should be no extraordinary problems that are especially to do with schools. There is the difficulty that arises with all work for public authorities who have their own form of contract. A private architect normally uses the R.I.B.A. form, and his way of job administration is related to it, so a strange form of contract upsets his normal routine, his standard forms for such things as invited tenders, variation orders, etc., may be unusable and he may even make errors in changing from one system to another. For instance, where the form of contract does not allow the release of retention money to a sub-contractor before completion of the main contract, the architect may omit to state this when inviting prices for a sub-contract, and use his normal R.I.B.A. form; and so become involved in long arguments between main and sub-contractor, and possibly delay work at the site.

All this means simply that whilst the aim is to see that everyone is employed productively we have been forced, since the war, into a lot of unproductive work.

And this takes me on to the second half of my paper.

The first point I would like to consider, and it is a very

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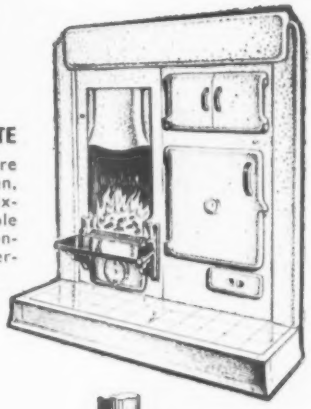

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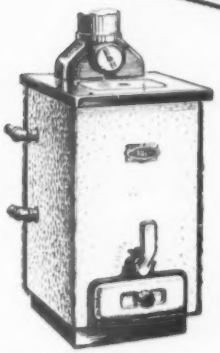

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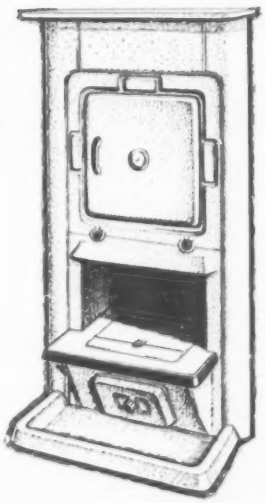

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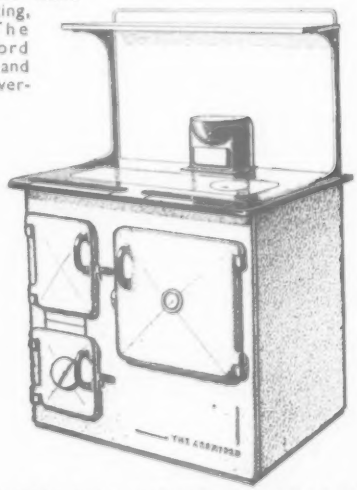

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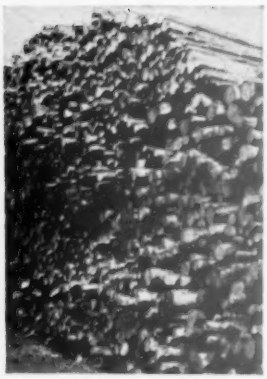

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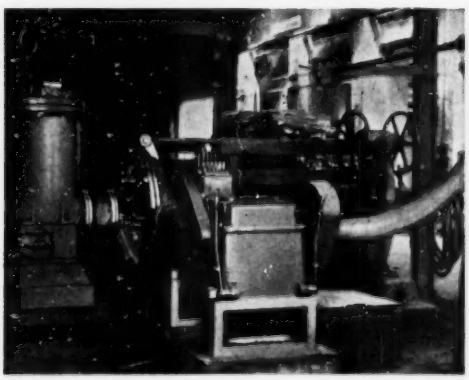

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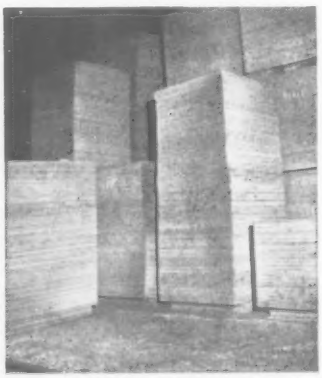

significant one, is that while there have been very great changes, and in some ways advances in architectural design and technique during the past fifty years, there seems to have been little change in the machinery for the control and administration of the private architect's office. It is probably true to say that the kind of partnership arrangement entered into by architects to-day is just the same as that used fifty years ago, and the more one thinks about it, the stranger it seems that little thought is given to this aspect of things. Perhaps the reason for this is that architects have an interesting job and are so fundamentally absorbed in their work itself that they get irritated or bored when they have to apply their minds to such mundane things as administration of the office.

I am, of course, assuming in the remarks that follow that there is and will continue to be room for and indeed need of the private architectural firm, working alongside the large public architectural offices that have grown so considerably in the last twenty-five years. I think that both sides of the profession are necessary, if only that the one may be perpetually keeping the other on its toes.

Whilst there is no point in change for its own sake, I do believe there is a need for a fresh approach to this side of the architect's problem, and it should at least be explored for the following reasons:

First, I think everyone will agree that it is much more difficult for a young man to start in practice to-day than it was fifty years ago. Clients are difficult to find and if he is lucky enough to be given a sizeable job, the necessary capital to equip his office and run it may be even more difficult, and when the job is complete it is still more difficult to find the next one.

Second, it is much more difficult for the small firm to maintain continuity to-day than it used to be in the past; and it is not possible, because of the high level of taxation, to put enough money away to create a reserve for slack times.

Third, it is almost impossible for the private architect to save sufficient money to allow him to retire from his practice at a reasonable age and hand it on to a younger and more energetic man.

These factors all add up to increasing difficulties for the beginner and for the small- or medium-sized firm. It appears that the bigger firms are to a certain extent better off. It seems they are better able to achieve a continuity of work. Because of their size they cover a large variety of work and get well known in many fields and they may become firmly established. This leads the modern kind of multiple client, whether public authority or industrial concern, to place its work with such established firms.

The old personal kind of client did not feel he was taking a risk with a comparatively unknown architect if through his personal knowledge he felt confidence in the man. The public authority or industrial concern has not the same feelings as a personal client. The appointment of architects and other professional men must go before a board of councillors or directors, and boards are traditionally cautious and always tend to place work with firms with big reputations. For these reasons I believe there is a growing tendency for the big jobs to go to the big firms. Strenuous objection may be taken to the trend, but if it is inevitable the fact should be faced and the young man starting up to-day will adjust his ideas accordingly. It may be that he should consider it more advantageous to look upon the principals of the large firms as his clients rather than struggle on trying to find clients of his own. In an enlightened office he may even find more understanding for his ideas than he will get from the type of client he is likely to land.

One of the most interesting developments in the modern office is the increasing freedom of the employed or assistant architect, and there is a problem in delegating more and more work whilst keeping the principal's responsibility to the client.

All this does not mean that the small firm will die out. I think there will always be a need for it. But I do believe that the bigger firms will tend to increase at the expense of the smaller ones, and if this is correct then it emphasizes even more my point about the need to investigate the legal foundations on which such firms are based.

They may be full partnerships, but they often take the form of an association which is in fact only a looser form of partnership; or they may be group practices with a number of associates practising anonymously; and there are various other systems. But there is one form of association which may have great advantages, although it is frowned upon by the R.I.B.A. and prohibited by the Architect's Registration Council, and that is the company structure; and I think that we ought to give some consideration to it.

The great feature of a company is that it is an impersonal structure and consequently can be a continuing entity and need not die or peter out at the death of the principal, as a partnership may well do. This is not to say that the individuals within the structure of a company may not themselves be strong personalities: one can think of many men in industry who act in much the same way as the professional men in the achievement of their objectives and ideals.

It may, for instance, be worth consideration, whether the company form might provide a better way in which architects could free themselves to some extent from administrative routine so that they could get back to their proper job of designing good buildings. It is true that in a partnership one could have someone—let us call him the office manager—who would attend to administrative detail; but he would not be a partner, and questions of status might arise if he had to deal with certain problems—as for instance material supplies. In the company form one can see the possibility of a director who would not need to be an architect but who could bring his special administrative skill to the assistance of the group as a whole.

Then is there not a possibility that the company form might hold some tax advantages? Although the Inland Revenue authorities have powers to charge surtax on certain companies which may distribute much less than their total profits, it is nevertheless true that many companies which come within the scope of this legislation are able to build up reserves out of profits after income tax and profits tax, whereas the private practitioner or the firm can only set aside what is left after income tax and surtax have been paid. It is possible, therefore, that the company form might not only provide a continuing entity but something which, by reason of the fact that it can set aside some reserve, might prove more attractive to a better type of staff because it might retain financial resources to cover the occasional lean periods.

It may be, too, that the company form could be used to provide principals with some form of pension scheme which at the moment is not available to the private practitioner or to the partnership. It is true that a committee has been considering the problem of tax relief for partnerships in connection with pension costs, and it may be that in due course the partnership will be put in much the same position as the employees of the larger companies and corporations. I believe it is true that if a man is to have a pension of £2,000 a year at 65 he must have saved £22,000 by that time—a virtual impossibility for the private practitioner. It is true that pension arrangements are not available to the controlling director of a company, that is to say to a director holding more than a 5 per cent interest in the shares, but is it not possible to envisage an application of the company form to some part of professional activities so as to provide for reasonable pensions?

The traditional Institute objection to the idea of a company is that the architect must for ever remain personally responsible to his client, and particularly in relation to any defects which may appear in the building he designs. But if the architect is allowed to insure against a mishap with a professional indemnity policy, the financial side of this personal responsibility can scarcely be said to remain as a stumbling block.

I think there is something deeper that underlies the traditional Institute attitude that there is something rather "indecent" in the idea of the architect as a limited liability company, or as an unlimited liability company. This perhaps is a hang-over from the times when it was still not quite the thing for a gentleman to enter commerce and when the professions were much more respected. But it is an idea that does not fit in with the economic and social life of the country to-day.

The architect is working at a disadvantage which is not only a personal one but one that affects the profession as a whole, when it is compared with civil engineering. The civil engineer is allowed to be a director of a building or civil engineering company but the architect is not. But it seems that the cause of architecture might be better served if some of the big building firms had on their board an architect, in the same way that they have a civil engineer. The position as it stands is that the engineer is on the board and the architect is employed in a salaried capacity much lower down on the scale, where he has no say in policy.

I do not mean that all architects should rush to form themselves into companies or even that I would particularly like to be a company myself; but I do believe it would be a good thing if the opportunity were there, and I think it would be worth while to explore the advantages and disadvantages.

To summarize, the possible advantages as I see them are:—

(1) The company structure, being less dependent on personalities, is more likely to achieve continuity.

(2) The company structure might enable the architect to be stronger financially, to carry the firm over slack periods, and so to achieve continuity.

(3) Clients might be more secure because of the stronger financial position of the architect and the continuing entity of the company.

(4) The architect director, by delegating administrative work to the administrative expert would be able to devote himself to architecture and better building.

(5) There would be a possibility of retirement through participation in a pension scheme.

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BROOMHILL BANK SPECIAL SCHOOL

Mechanical Engineering: Denniss Paine and Co., Ltd. *Electrical Engineering:* Gilbert and Stamper, Ltd. *Reinforced Concrete Work:* The Kleine Co., Ltd. *Steel Trusses:* Boulton and Paul, Ltd. *Roofing Felt and Insulation:* D. Anderson & Son, Ltd. *Copper Roofing:* Frederick Braby & Co. *Metal Windows:* Mellowes & Co., Ltd. *Ironmongery:* Yannedis & Co. *Suspended Ceilings:* Gyproc Products, Ltd. *Acoustic Insulation:* May Acoustics, Ltd. *Wrought Ironwork:* Bayliss, Jones & Bayliss, Ltd. *Cast Lead Sundial:* Stoner & Saunders, Ltd. *Sanitary Fittings:* Associated Clay Industries, Ltd. *Granwood Flooring:* The Granwood Flooring Co., Ltd. *Hardwood Strip Flooring:* Holls Bros., Ltd. *Dome Lights:* Pilkington Bros. *Sand-lime Bricks:* Ryarsh Brick & Sand Co., Ltd. *Lighting Fittings:* The Merchant Adventurers, Ltd., Holophane, Ltd. *Roller Shutters:* Dennison Kett and Co. *Flush Doors:* Veneercraft, Ltd.

GRAVESEND WESTCOURT PRIMARY SCHOOL

Heating and Hot Water: C. S. Thompson (Letchworth), Ltd. *Electrical Installation:* South Eastern Electricity Board. *Structural Steelwork:* George Pauling and Co., Ltd. *Bar Joists:* Bracketing, Centering & Lathing, Ltd. *Woodwool & Built-up Felt Roofing:* Permanite, Ltd. *Metal Windows:* James Gibbons, Ltd. *"Carda" Windows:* Holcon, Ltd. *Doors:* Jayanbee Joinery, Ltd. *Ironmongery:* Nettlefold & Moser, Ltd. *Acoustic Ceilings:* Merchant Trading Co., Ltd. *Sanitary Fittings:* Dent & Hellyer, Ltd. *Composition Tile Flooring:* Marley Tile Co., Ltd. *Wood-Block Flooring:* On Site Flooring Co., Ltd. *Roller Shutters:* G. Brady & Co., Ltd. *Helplast W.C. Cubicles:* Builders Supply Co. (Hayes), Ltd. *Dome Lights:* Pilkington Bros., Ltd. *Lettering:* Dales (Lettering), Ltd., A. J. Binnes, Ltd. *W.I. Railings:* S. W. Farmer & Sons, Ltd. *Hollow Tile Slabs:* Helical Bar and Concrete Co., Ltd. *Cloakroom Equipment:* Parker, Winder & Achurch, Ltd.

MAIDSTONE SHEPWAY JUNIOR SCHOOL

Heating & Ventilation: Matthew Hall & Co., Ltd. *Electrical Installation:* Pinching & Walton, Ltd. *Reinforced Concrete Work:* The Kleine Co., Ltd. *Steel Frame to Assembly Hall & Dining Room:* Hills (West Bromwich), Ltd. *Roof Trusses:* Boulton & Paul, Ltd. *Roof Decking:* The Ruberoid Co., Ltd. *Roof Insulation:* D. Anderson & Son, Ltd. *Metal Windows:* James Gibbons, Ltd. *Internal Doors:* Jayanbee Joinery, Ltd. *Ironmongery:* James Gibbons, Ltd. *Suspended Ceilings:* Thomas & Wilson, Ltd., Tentest Fibre Board Co., Ltd. *Acoustic Insulation:* Newalls Insulation Co., Ltd. *Lettering:* The Lettering Centre, Dales (Lettering), Ltd. *Staircase Balustrades:* Stoner & Saunders, Ltd. *Sanitary Fittings:* John Bolding, Ltd. *Semastic Tile Flooring:* Semtex, Ltd. *Granwood Flooring:* Granwood Flooring Co., Ltd. *Roller Shutters:* Shutter Contractors, Ltd. *Dome Lights:* Pilkington, Ltd.

SEVENOAKS WILDERNESSE SECONDARY SCHOOL

Structural Steelwork: The Morris Singer Co., Ltd. *Roofing:* William Briggs & Sons, Ltd. *Precast Floors & Roofs:* Limpus, Ltd. *Windows:* The Morris Singer Co., Ltd. *Glazing:* Faulkner Greene. *Joinery:* Constructional Units, Ltd. *Doors:* Constructional Units, Ltd. *Reinforcement:* T. O. Jones, Ltd. *Fencing:* Bayliss, Jones & Bayliss. *Stone Facing:* Atlas Stone Co., Ltd. *Wall Tiling:* Parkinsons, Ltd. *Plastering:* Proops & Partners. *Plumbing:* F. J. Baynes. *Sanitary Fittings:* Associated Clay Industries, Ltd. *Painting:* Leslie & Co., Ltd. (General Contractors). *Electrical Installation:* South Eastern Electricity Board. *Heating:* Engineering Services, Ltd. *Domestic Hot Water:* Engineering Services, Ltd. *Lantern Lights:* The Morris Singer Co., Ltd. *Cloakroom Fittings:* James Gibbons, Ltd. *Additional Fittings:* Lockerbie & Wilkinson (Birmingham), Ltd. *Hardware:* Yannedis & Co., Ltd. *Furniture:* County Supplies Department. *Kitchen Equipment:* Ministry of Education Pool Equipment. *Flooring:* "Marquetone," Chittenden & Simmons (Contracting), Ltd.; "Corbulin," Corbulin, Ltd.; "Marley Tile," The Marley Tile Co., Ltd.; "Kahr Flooring" Masters & Andren, Ltd., "P.V.C.," C. Holden, Ltd.; Granolithic Paving," Kendell's Stone & Paving Co.; "Terrazzo," The Mosaic & Terrazzo Co., Ltd.; Concrete Tiles, Langley (London), Ltd.; "Plimber," laid by The Central Flooring Co., Ltd., supplied by Plimber, Ltd.

CHISLEHURST AND SIDCUP REDHILL ROAD PRIMARY SCHOOL

Bitumetal Roofing: William Briggs & Sons, Ltd. *Precast Terrazzo Tiles:* Art Pavements & Decorations, Ltd. *Wrot Iron Balcony Railings:* S. F. Farmer & Son, Ltd. *Paving Slabs:* Broadmead Products, Ltd. *Precast Concrete Units:* Kent Concrete Products, Ltd. *Sanitary Fittings:* Associated Clay Industries, Ltd. *Suspended Concrete Floors and Roofs:* Diespeker & Co., Ltd. *Reinforced Concrete Work:* The British Reinforced Concrete Co., Ltd. *Metal Windows and Doors:* Brunswick Metal Casement & Engineering Co., Ltd. *Composition Flooring:* Leatherflor, Ltd. *Structural Steelwork:* Chamberlain Industries, Ltd. *Marley Tile Flooring:* The Marley Tile Co., Ltd. *Roller Shutters:* Messrs. John Barker & Sons. *W.C. Partitions and Doors:* Flexo Plywood Industries, Ltd. *Suspended Fibreboard Ceilings:* Sundeala Board Co., Ltd. *Cloakroom Fittings:* James Gibbons, Ltd. *Fencing:* Bayliss, Jones & Bayliss, Ltd. *Paint:* W. H. Screeton Paintmaker, Ltd.

S.P.&D. LTD. WAREHOUSE, MAIDSTONE

Tarmac: General Asphalte Co., Ltd. *Sanitary Fittings:* John Bolding & Sons, Ltd. *Floors (warehouse):* Stuarts Granolithic Co., Ltd. *Wood Block Floors (offices):* Viger Bros., Ltd. *Metal Windows:* Mellowes & Co., Ltd. *Doors:* F. Hills & Sons, Ltd. *Ironmongery and Fencing:* A. J. Binns, Ltd. *Glass Bricks:* Faulkner Greene & Co., Ltd. *Railway:* Railway Executive (S.R.). *Paint:* Screeton Paintmakers, Ltd. *Bricks:* Hall & Co., Ltd. *Extract Fans:* Sturtevant Engineering Co., Ltd. *Wrought-iron:* Carron Company. *Artificial Stone:* Architectural Displays, Ltd. *Petrol Pump:* Beck & Co. (Meters), Ltd. *Lamp Standards:* Revo Electric Co., Ltd. *Bicycle Racks:* Constructors, Ltd. *Overhead Door Gear:* P. C. Henderson, Ltd. *Steel Decking and Finish:* The Ruberoid Co., Ltd. *Roof Glazing:* Mellowes & Co., Ltd. *R.W. Goods:* Burn Bros. (London), Ltd. *Cullamix (supply and application):* Guntex, Ltd. *Vermiculite Plastering:* E. E. Cheeseman & Sons, Ltd. *Vermiculite:* Vermiculite (London), Ltd. *Electrical Installation and Truck Charging Equipment:* Thompson Ritchie & Co., Ltd. *Structural Steel:* James Bros. (Hamworthy), Ltd. *Overhead Doors:* Overhead Doors, Ltd. *Dome Lights:* T. & W. Ide, Ltd. *Signs:* Chase Products, Ltd. *Ventilators:* Colt Ventilation, Ltd.

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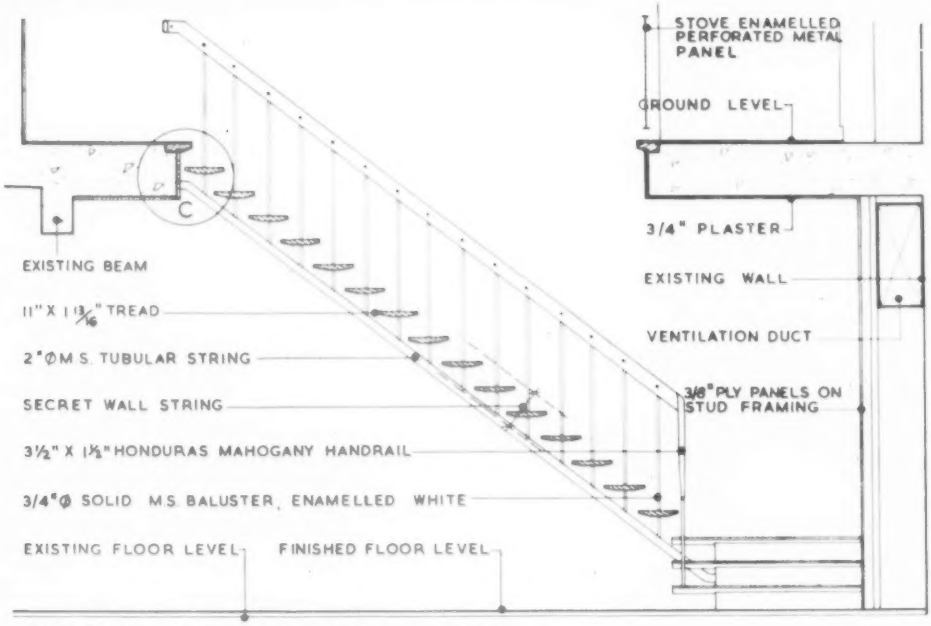
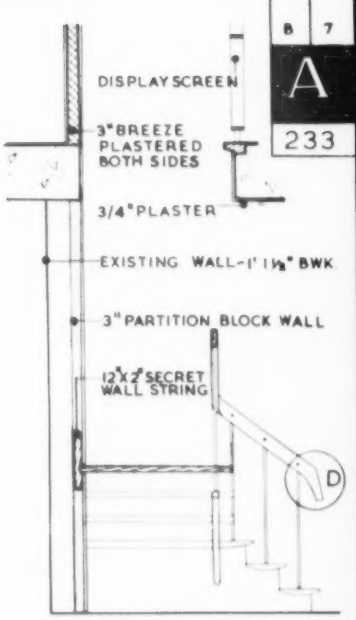
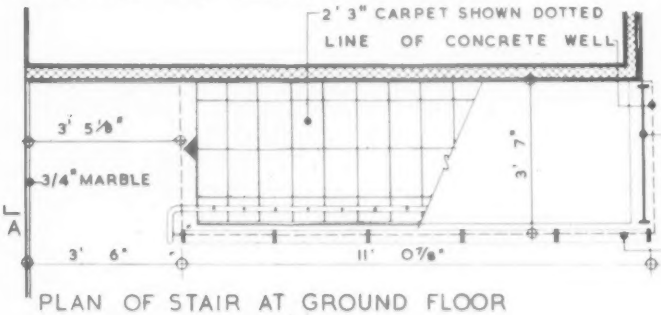


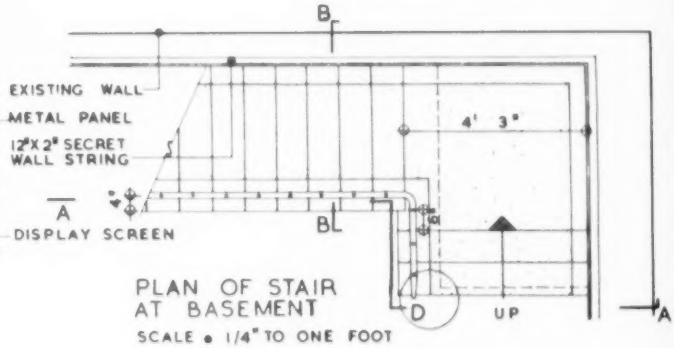
SECTION A-A SCALE • 1/4" TO ONE FOOT



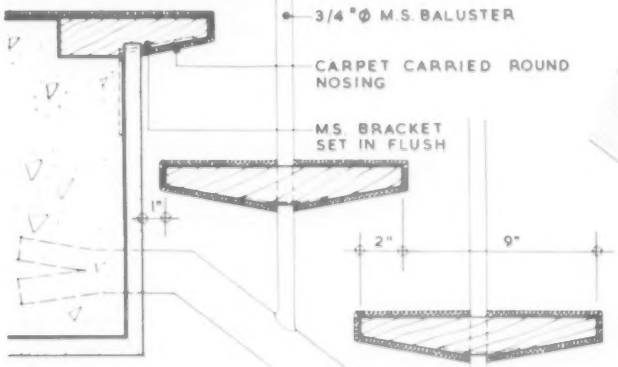
SECTION B-B



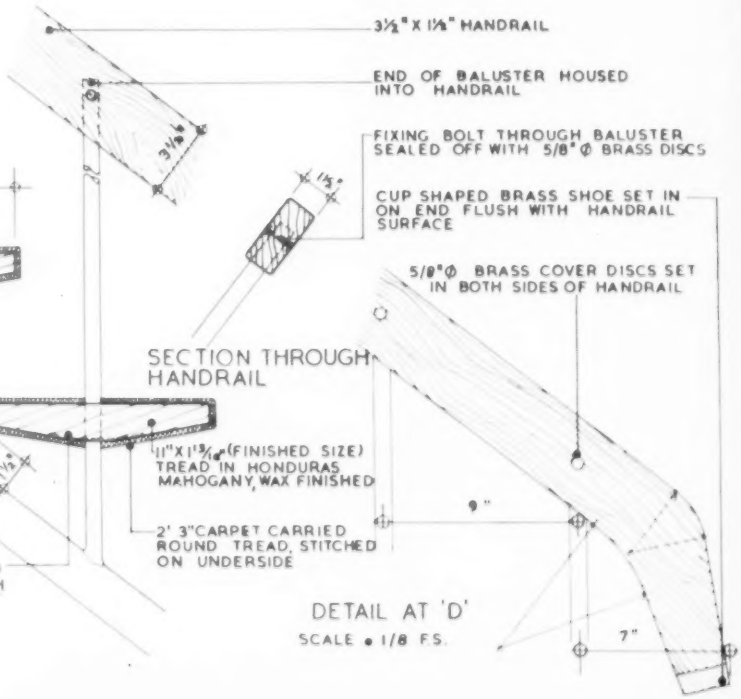
PLAN OF STAIR AT GROUND FLOOR



PLAN OF STAIR AT BASEMENT
SCALE • 1/4" TO ONE FOOT



DETAIL AT 'C'
SCALE • 1/8 FULL SIZE


3½" X 1½" HANDRAIL
END OF BALUSTER HOUSED INTO HANDRAIL
FIXING BOLT THROUGH BALUSTER SEALED OFF WITH 5/8"Ø BRASS DISCS
CUP SHAPED BRASS SHOE SET IN ON END FLUSH WITH HANDRAIL SURFACE
5/8"Ø BRASS COVER DISCS SET IN BOTH SIDES OF HANDRAIL
11" X 1 3/16" (FINISHED SIZE) TREAD IN HONDURAS MAHOGANY, WAX FINISHED
2' 3" CARPET CARRIED ROUND TREAD, STITCHED ON UNDERSIDE
9"
7"

SECTION THROUGH HANDRAIL

DETAIL AT 'D'
SCALE • 1/8 F.S.

2"Ø M.S. TUBULAR STRING, ENAMELLED WHITE
BURNISHED WELD
4"X 2" M.S. BRACKET WELDED TO BALUSTER, SET IN FLUSH WITH UNDERSIDE OF TREAD
WELD

PLAN DETAIL OF FIXING TO UNDERSIDE OF TREAD SCALE • 1/8 F.S.

STAIRCASE: SHOWROOM IN OLD BOND STREET

ARCHITECT: ELLIS E. SOMAKE

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

ALDERSHOT B.C. (a) Building comprising public library and shop. (b) Borough Engineer, Town Hall. (c) 2gns. (d) June 19.

* * *

BECKENHAM B.C. (a) 4 houses at St. James's Avenue, Elmers End. (b) Borough Engineer, Town Hall. (c) £2. (e) June 29.

* * *

BRENTWOOD U.C. (a) 128 houses, Bishops Hall Estate. (b) Engineer and Surveyor, Council Offices (on billheads). (c) 3gns. (d) June 15.

* * *

BUCKINGHAM R.C. (a) 8 houses at Akeley, 8 at Marsh Gibbon and 8 at Padbury, with road works at Akeley and Padbury. (b) Messrs. Scherrer and Hicks, 27, Harcourt House, 19, Cavendish Square, London, W.1. (d) June 19, indicating sites.

* * *

BURTON-UPON-TRENT B.C. (a) 2 shops and 4 houses, with site works, drainage, etc., Rolleston Road Estate. (b) Borough Surveyor, Town Hall. (c) 2gns. (e) June 25.

* * *

CARLISLE C.C. (a) 8 shops and flats at Harraby. (b) City Surveyor, 18, Fisher Street. (c) 2gns. (e) July 4.

* * *

CLARE R.C. (a) 6 bungalows at Kedington. (b) Engineer and Surveyor, Stonehall, Clare, Sudbury, Suffolk. (c) 2gns. (e) July 3.

* * *

CHESTERFIELD B.C. (a) (Group 1) 66 houses and (Group 2) 46 houses, Pevensey Estate. (b) Borough Engineer, Town Hall. (c) 2gns. (e) June 26.

* * *

CROOK AND WELLINGTON U.C. (a) 100 houses, Old Wheatbottom site, Crook. (b) Council's Clerk, Council Offices, Glenholme, Crook, Co. Durham. (c) 2gns. (d) June 15.

* * *

DEVON C.C. (a) Store at Pinhoe for County Supplies Department. (b) County Architect, 97, Heavitree Road, Exeter. (c) 2gns crossed cheque drawn to Council. (d) June 15.

* * *

EASTBOURNE B.C. (a) Hostel block and dining/teaching block for Chelsea College of Physical Education at rear of "Bishopsbourne," Carlisle Road, Eastbourne. (b) Borough Surveyor, 2, Saffrons Road; with details of substantial building works (other than housing) carried out. (d) June 20. (e) Aug. 26.

* * *

EAST SUFFOLK C.C. (a) Police house, garage and office at Raydon, Suffolk. (b) County Architect, County Hall, Ipswich. (c) 2gns cheque payable to Council. (d) June 15. (e) July 7.

* * *

EAST SUFFOLK C.C. (a) (1) police section station at Framlingham (2) police section station at Oulton Broad and (3) inspector's house at Leiston. (b) County Architect, County Hall, Ipswich. (c) 2gns each site, cheque payable to Council. (d) June 15. (e) July 7.

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EAST SUFFOLK C.C. (a) Detached house, pair of garages and alterations at the Police Station, Eye, Suffolk. (b) County Architect, County Hall, Ipswich. (c) 2gns cheque payable to Council. (d) June 15. (e) July 7.

* * *

ENFIELD U.C. (a) 36 houses and 16 flats, Bycullah House Estate. (b) Engineer and Surveyor, 7, Little Park Gardens. (c) 2gns. (d) June 16. (e) July 3.

* * *

GIPPING R.C. (a) 4 houses at Willisham and 4 houses and 2 bungalows at Harleston. (b) Engineer and Surveyor, Council Offices, Needham Market, near Ipswich. (c) £3. (e) June 19.

* * *

GRAVESEND B.C. (a) Branch library at Woodlands Park. (b) Borough Engineer, 6, Woodville Terrace. (c) 2gns. (e) June 29.

* * *

GRIMSBY B.C. (a) General building contract for foundations, basements, superstructure, drainage, paths, etc., for Western Primary School at Broadway, Littlecoates. (b) Borough Engineer, Municipal Offices, Town Hall Square. (c) £5. (e) June 30.

* * *

GUILDFORD R.C. (a) (Contract No. III) 30 dwellings, Cardinals Estate, Tongham. (b) Engineer and Surveyor, Millmead House. (c) 6gns. (e) July 1.

* * *

HALIFAX B.C. (a) Extensions at Mixenden Primary School. (b) Borough Engineer, Crossley Street. (c) 2gns. (e) July 7.

* * *

HAMPSHIRE C.C. (a) Erection of 3 secondary schools (floor area approx. 37,000 sq ft per school). (b) County Architect, The Castle, Winchester; with particulars of recent similar contracts undertaken. (d) July 16.

* * *

HOVE B.C. (a) 8 old persons' flats at Ingram Crescent. (b) Borough Surveyor, Town Hall. (c) 3gns. (d) June 15. (e) July 13.

* * *

LINCOLN C.C. (a) Inspector's house at Ashfield Road, Sleaford; house and office at Osbournby; house and office at Baston; for police. (b) County Architect, County Offices, Sleaford. (e) June 30.

* * *

MAIDENHEAD B.C. (a) (Contract 4.A) 11 pairs of houses, Spencers Estate. (b) Borough Engineer, 14, Craufurd Rise. (c) £2. (e) June 24.

* * *

MALMESBURY B.C. (a) 24 houses, Corn Gaston site, Malmesbury. (b) Messrs. Edwards and Webster, 10, St. Mary Street, Chippenham, Wilts. (c) 3gns. (e) June 24.

* * *

MALVERN U.C. (a) 89 houses at Pound Bank. (b) Surveyor and Water Engineer, The Council House. (c) 2gns. (e) June 25.

* * *

***MARGATE B.C.** (a) (Contract No. 8) 6 shops with flats over, Cambourne Avenue Housing Estate, Westgate. (b) Borough Engineer, 38, Grosvenor Place. (c) 2gns. (e) June 23. See page 28.

* * *

MONMOUTHSHIRE C.C. (a) Infants' school at Llwynu, Abergavenny. (b) County Architect, Queen's Hill, Newport. (c) 3gns cheque payable to Council. (e) June 30.

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NEWCASTLE-UPON-TYNE C.C. (a) Alterations to dressing accommodation, etc., at Walker Baths. (b) City Architect, 18, Cloth Market, 1. (e) July 15.

* * *

NEWCASTLE-UPON-TYNE C.C. (a) (1) 102 houses in Group I, Section A and (2) 119 houses in Group II, Section B, Kenton North Estate. (b) City Architect, 18, Cloth Market, 1 (stating contract or contracts). (e) July 2.

* * *

N. IRELAND—GOVERNMENT OF NORTHERN IRELAND. (a) Civil Defence control centre at Mount Eden Park, Belfast. (b) Ministry of Finance (Room 103), Law Courts Building, May Street, Belfast. (c) £5. (e) July 6.

* * *

N. IRELAND—OMAGH R.C. (a) 19 dwellings at Fintona, Co. Tyrone. (b) Messrs. F. H. Wright and Partners, 11, College Square North, Belfast. (c) 3gns. (e) June 22.

* * *

NOTTINGHAMSHIRE C.C. (a) Lavatory accommodation at Beeston County Girls' Secondary School. (b) County Architect, County Hall, Trent Bridge, Nottingham. (c) 1gn. (d) June 13.

* * *

OLDHAM B.C. (a) Conversion of 61, Werneth Hall Road into midwives' hostel. (b) Borough Engineer, 75, Union Street. (c) 2gns. (e) July 2.

* * *

OSSETT B.C. (a) 44 houses, etc., in 6 groups. (b) Borough Surveyor, Town Hall. (e) June 29.

* * *

PENRITH R.C. (a) 6 houses at Plumpton, Penrith. (b) Council's Clerk, Mansion House, Penrith. (c) 2gns. (e) June 20.

* * *

PLYMOUTH C.C. (a) (1) 6 flats at Grenville Road, St. Jude's, and (2) pair of houses at Desborough Road, St. Jude's. (b) City Architect, Seymour Road. (c) 3gns each scheme, payable to Corporation. (d) June 17.

* * *

SADDLEWORTH U.C. (a) 104 houses and 12 flats, Carr Barn Estate, Greenfield. (b) Messrs. Howard and Benson, 88, Mosley Street, Manchester, 2. (c) 2gns. (e) July 6.

* * *

SCOTLAND—BURGH OF DALKEITH. (a) 25 houses at Back Street, Dalkeith (separate trades). (b) Messrs. Morham and Brotchie, 29, Hanover Street, Edinburgh. (e) June 24.

* * *

SCOTLAND—FIFE C.C. (a) (1) Reinforced concrete with specialized prestressed work incorporated, (2) several works (under a single contract) for all other trades excepting heating and electrical engineering, (3) heating engineering, (4) electrical engineering; for proposed high school at Buckhaven. (b) (1) and (2) Messrs. James Gentles and Son, Central Chambers, High Street, Kirkcaldy. (3) and (4) Messrs. Frank W. Raynes and Son, 40, Second Avenue, Cathcart, Glasgow. (e) (1) and (2) July 7; (3) and (4) June 30.

* * *

SCOTLAND—NORTH OF SCOTLAND HYDRO-ELECTRIC BOARD. (a) Repairs and conversion of Auchmore House, Killin, into flats. (b) Mr. Alexander Cattanach, The Laurels, Kingussie.

* * *

SOWERBY BRIDGE U.C. (a) Salvage, depot at Mearclough, Sowerby Bridge. (b) Council's Architect, Beech Royd, Beech Road. (c) 1gn. (e) June 19.

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STAFFORD R.C. (a) 8 houses at Bishton, near Rugeley. (b) Council's Clerk, Council Offices, 7, St. Mary's Grove. (c) 2gns. (e) July 6.

* * *

THEDWASTRE R.C. (a) 3 pairs of bungalows at Felsham. (b) Messrs. Hunt and Coates, 84, Guildhall Street, Bury St. Edmunds. (c) 3gns. (d) June 12. (e) July 8.

* * *

TRURO C.C. (a) 23 houses at Malabar. (b) City Engineer, Municipal Buildings. (c) 2gns crossed cheque. (e) June 25.

* * *

WALES GAS BOARD. (a) Showroom and offices at Swansea. (b) The Manager, Swansea Undertaking, Wales Gas Board, Oystermouth Road, Swansea. (c) £4.

* * *

WEST BRIDGFORD U.C. (a) (Contract No. 8H) 20 aged persons' dwellings, Edwalton Estate. (b) Engineer and Surveyor, The Hall. (c) 2gns. (e) June 24.

* * *

WEST RIDING STANDING JOINT COMMITTEE. (a) 1 house at Mytholmes Lane, Haworth; 1 at Manchester Road, Slaithwaite; 1 at Back Gate, Ingleton; 1 house, office and garage at Station Road, Clapham; 1 house, office and garage at Ramsgill; 1 house and office at Baitings, Soyland; 2 houses, office and garage at Main Street, Gisburn; 3 houses at Dodd Naze Estate, Hebden Bridge; 8 houses at Regent Road, Skipton; 1 house at Alexandra Road, Mexborough. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns. (e) July 3.

* * *

WEYMOUTH AND MELCOMBE REGIS B.C. (a) 18 houses, Chapelhay Estate, Weymouth. (b) Borough Engineer, 6, Pulteney Buildings, Weymouth. (c) 2gns. (e) June 29.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

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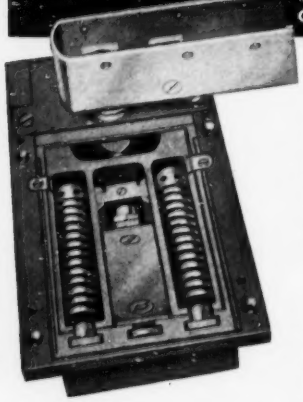

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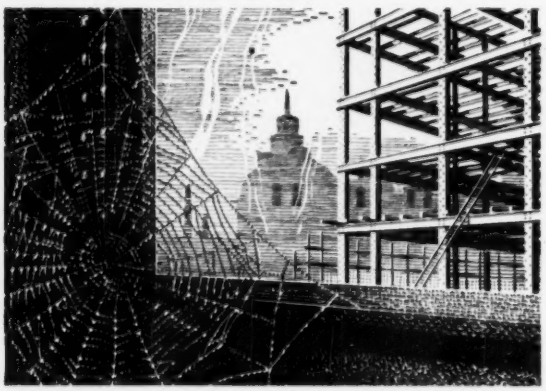

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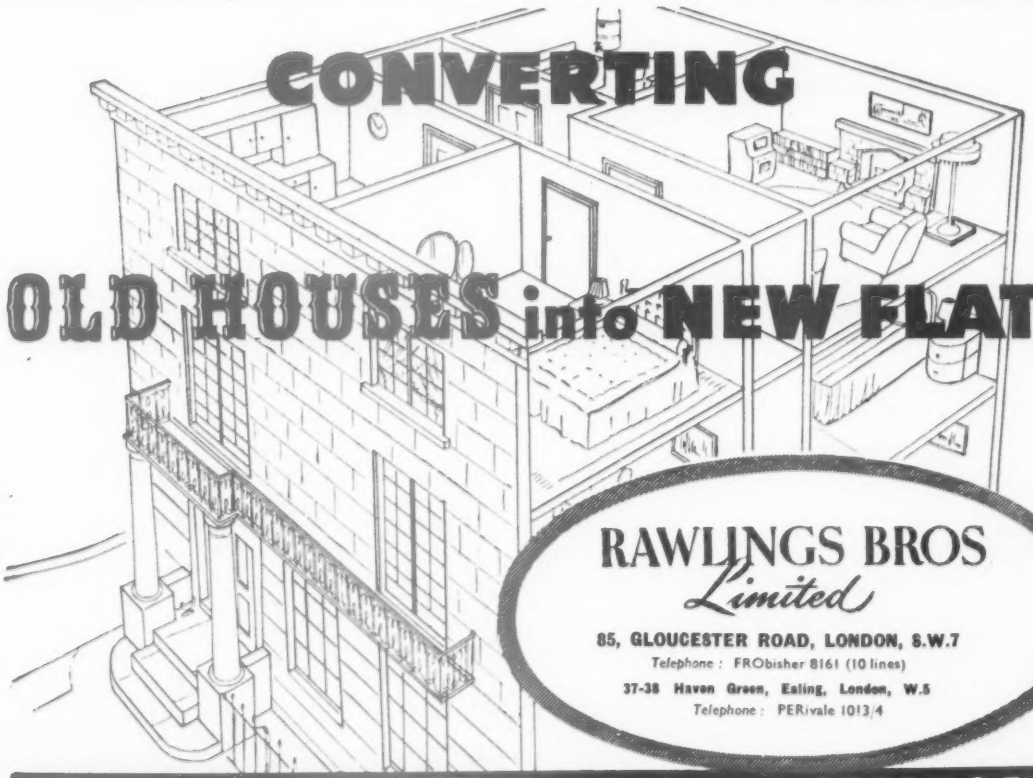

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APPOINTMENTS

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order 1952.

COUNTY BOROUGH OF WEST HAM.

BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

ARCHITECTS of imagination and initiative required.

(a) (2) SENIOR ASSISTANT ARCHITECTS, APT. VIII, £760×£25—£835.

(b) SENIOR ASSISTANT, PLANNING (ARCHITECT/PLANNER), APT. VIII, £760×£25—£835.

(c) (2) ASSISTANT ARCHITECTS, APT. VI, £670×£20×£20×£25—£735.

(d) ASSISTANT ARCHITECT, APT. V, £595×£15×£15×£20—£645.

(London Allowance in addition to salary.)

Applicants must all have Housing experience, and in addition for post(s).

(a) should be A.R.I.B.A., capable of controlling large Contracts.

(b) should be A.R.I.B.A., and A.M.T.P.I. with experience in layout of Housing development in reconstruction areas.

(c) should be A.R.I.B.A. or Registered Architects and able to supervise Contracts.

(d) should be A.R.I.B.A. or Registered Architects.

Applications also invited from GENERAL ASSISTANTS, TECHNICAL (aged 18 years and upwards with some experience)—General Division (£190—£450 and London Allowance).

Application forms (returnable by 22nd June, 1953), from Thomas E. North, O.B.E., F.R.I.B.A., Dist. T.P., 70 West Ham Lane, Stratford, E.15. [7124

METROPOLITAN WATER BOARD.

APPOINTMENT OF SENIOR ASSISTANT ARCHITECT.

THERE is a vacancy for a SENIOR ASSISTANT ARCHITECT on the permanent staff. Salary scale £917—£27—£1,025 per annum. Maximum age 45 years. It is a condition of the appointment to and the holding of the position that the selected candidate shall be and continue to be a subscribing corporate member of the Royal Institute of British Architects.

A house may be available, if required, in a good neighbourhood, at an inclusive rental of £125 p.a.

A form of application may be obtained from the undersigned on receipt of a stamped addressed foolscap envelope quoting reference (A) and completed applications must arrive not later than 29th June, 1953.

W. S. CHEVALIER, Clerk of the Board.

Offices of the Board,
New River Head,
Rosebery Avenue,
London, E.C.1. [7127

MINISTRY OF WORKS.

VACANCIES exist in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS with recognized training and fair experience. Vacancies mainly in London and Risley (nr. Warrington). Successful candidates will be employed on a wide variety of Public Buildings including Atomic Energy and other Research Establishments, Telephone Exchanges and Housing.

London Salary: Up to £628 per annum. Starting pay according to age, qualifications and experience. Rates outside London slightly lower.

Reasonable prospects of promotion to Leading and Senior Architectural Assistant. Although these are not established posts many have long-term possibilities and competitions are held periodically to fill established vacancies.

Write stating age, nationality and full details of training and experience, to Chief Architect, W. G. 10/C.A.2, Ministry of Works, Abell House, John Islip Street, London, S.W.1. [7077

APPOINTMENTS—contd.

NIGERIAN COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY.

APPLICATIONS are invited for the post of LECTURER IN BUILDING. Duties will consist of instruction in Theory of Structures, Building Research and Building Construction to students of Architecture and in building to Civil Engineering students.

The College is to be developed along the general lines of a U.K. Technical College for work of post-School Certificate standard and has branches at Zaria, Ibadan and Enugu.

Applicants should preferably have had previous Technical College experience and must possess either a professional qualification in Architecture, Structural and Civil Engineering, or Quantity Surveying or a Technical College Diploma in Building.

Post is pensionable, but appointment on contract or secondment possible in certain circumstances. Salary scale £750-£1,560 p.a., including overseas allowance. Point of entry into scale determined by experience. House provided at rent £57-£129 p.a., depending on basic salary. Free first-class passages once each way for each tour of service for person appointed and wife; either a passage allowance or a maintenance allowance for up to two children under 18. Income tax rates much lower than in U.K. Leave on full salary at rate of 7 days for each completed month of resident service. Tours of service likely to be 10-18 months.

Write for further information to the Secretary, Advisory Committee on Colonial Colleges, 15, Victoria Street, London, S.W.1. Closing date for applications 22nd June, 1953. [7143

BOROUGH OF WORTHING.

NEW SECONDARY TECHNICAL SCHOOL.

APPOINTMENT OF CLERK OF WORKS.

APPLICATIONS are invited for the appointment of a TEMPORARY CLERK OF WORKS in connection with the erection of the above School, at a salary of twelve guineas per week paid monthly. The duration of the appointment would nominally be for 18 months, and the appointment would be terminable by one month's notice on either side.

Applicants must be thoroughly experienced in the supervision of all building trades and should have a sound knowledge of pre-cast concrete work.

Applications, giving full particulars of age, training and experience, together with copies of at least two recent testimonials, should be sent in an envelope endorsed "Clerk of Works—Secondary Technical School" to the Borough Engineer and Surveyor, Town Hall, Worthing, so as to reach him not later than Wednesday, the 17th June, 1953.

ERNEST G. TOWNSEND,
Town Clerk.

Town Hall,
Worthing.
27th May, 1953. [7133

CITY OF BIRMINGHAM PUBLIC WORKS DEPARTMENT.

APPLICATIONS are invited for the following appointments in the Architectural Department:—

(a) ASSISTANT ARCHITECT, Grade A.P.T.VIII (£760/£835 per annum).

(b) ASSISTANT ARCHITECT, Grade A.P.T.V (£595/£645 per annum).

(c) ASSISTANT QUANTITY SURVEYORS, Grade A.P.T.VI (£670/£735 per annum).

For posts (a) and (b) the Associate Membership of the R.I.B.A. or equivalent qualification must be held and for post (c) the Associate Membership of the Royal Institution of Chartered Surveyors (Quantity Section) or equivalent qualification.

The posts are permanent, superannuable, subject to a medical examination and to one month's notice on either side.

Applications, endorsed with the heading of the post, stating age, qualifications and experience, together with the names of two persons to whom reference can be made, should reach the undersigned not later than the 27th June, 1953.

Canvassing disqualifies.

A. G. SHEPPARD FIDLER, City Architect.
Civic Centre, Birmingham, 1. [7142

APPOINTMENTS—contd.

COUNTY BOROUGH OF EAST HAM.

SENIOR ARCHITECTURAL ASSISTANT. Salary £670-£735 (Grade APT. VI).

ARCHITECTURAL ASSISTANT. Salary £555-£600 (Grade APT. IV).

ENGINEERING ASSISTANTS (2). Salary £595-£645 (Grade APT. V).

ENGINEERING ASSISTANT. Salary £465-£510 (Grade APT. I).

QUANTITY SURVEYOR. Salary £555-£600 (Grade APT. IV).

London Weighting is paid in addition. Salaries in excess of the minima may be paid according to the qualifications and experience of successful candidates.

Subsistence allowances may be paid to persons appointed, if unable to obtain suitable housing accommodation.

Further details and form of application (returnable by Monday, 22nd June, 1953) obtainable from the Town Clerk, Town Hall, East Ham, E.6. [7144

BOROUGH OF PORT TALBOT.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

BOROUGH SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the above appointment in the Borough Engineer's Department within the range of A.P.T. IV (£555-£600×£15 increments).

Applications must be of Intermediate R.I.B.A. standard. The appointment to be subject to medical examination and contribution to the Superannuation Scheme. Applications on Forms obtainable from the Borough Engineer, Municipal Buildings, Port Talbot, to be received by the undersigned not later than noon, Tuesday, 16th June, 1953.

W. KING DAVIES,
Town Clerk.

Municipal Buildings,
Port Talbot,
Glam.
1st June, 1953. [7138

BOROUGH OF OLDBURY.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

APPLICATIONS are invited for the undermentioned appointments in the Architects' Section of the Borough Surveyor's Department:—

(a) ASSISTANT ARCHITECT, Grade A.P.T. V(a) (Housing).

(b) ASSISTANT ARCHITECT, Grade A.P.T. V(a) (Education).

(c) ARCHITECTURAL ASSISTANT, Grade A.P.T. IV (Housing).

(d) ARCHITECTURAL ASSISTANT, Grade A.P.T. III.

Applicants for appointments (a) and (b) should be qualified members of the R.I.B.A. and preferably having previous experience with a local authority. Candidates for (a) should be experienced in the layout of contemporary housing schemes, the design and construction of municipal houses, flats and shopping centres, and capable of administering building contracts.

For appointment (b) candidates should be qualified to take charge of the maintenance of education and public buildings, including the preparation of estimates, working drawings and specifications and administration of building contracts.

Applicants for appointments (c) and (d) should possess Intermediate R.I.B.A. status or its equivalent and have had practical experience in the preparation of working drawings, details and specifications for houses, flats and alterations to public buildings and be able to supervise building contracts.

The appointments will be subject (a) to the conditions of the service of the National Joint Council for Local Authorities Administrative, Professional, Technical and Clerical Service, (b) to the Local Government Superannuation Act, 1937, and (c) to the successful candidate passing a medical examination.

Applications, giving particulars of age, experience, etc., together with the names of two referees, should be addressed to the undersigned not later than Monday, 29th June, 1953.

KENNETH PEARCE,
Town Clerk.

Municipal Buildings,
OLDBURY. [7147

APPOINTMENTS—contd.

TIMBER DEVELOPMENT ASSOCIATION.

ARCHITECT.

APPLICATIONS are invited for the appointment of ARCHITECT in the Research and Design Department of the Timber Development Association at a commencing salary of £1,000 per annum. Applicants should be Fellows or Associates of the Royal Institute of British Architects and should have a keen sense of contemporary design and an aptitude for the development of new techniques of construction and timber utilization. Experience or special interest in educational activities and scientific developments would be an advantage. The successful candidate will be required to join the Association's Staff Superannuation Scheme, if invited to do so.

Applications, stating age, qualifications and experience, together with names of three persons to whom reference could be made, should be addressed to the Director, Timber Development Association, Ltd., 21, College Hill, London, E.C.4, to be received not later than Monday, 29th June. [7145

CONTRACTS

BOROUGH OF MARGATE.

ERECTION OF SIX SHOPS WITH FLATS OVER.

CAMBOURNE AVENUE HOUSING SITE—CONTRACT NO. 8.

TENDERS are invited for the ERECTION of SIX SHOPS with Flats over on the Cambourne Avenue Housing Estate, Westgate.

Applications for Specification, Bills of Quantities, Form of Tender and Conditions should be made to the Borough Engineer, 38, Grosvenor Place, Margate, and be accompanied by a deposit of £2 2s. which will be returned upon receipt of a bona fide Tender. Plans may also be inspected at the office of the Borough Engineer.

Tenders, sealed in the envelopes provided, and bearing no name or mark indicating the identity of the sender, are to be received by the undersigned not later than First Post TUESDAY, 23rd June, 1953.

The Corporation do not bind themselves to accept the lowest or any Tender.

T. F. SIDNELL,
Town Clerk.

40, Grosvenor Place,
Margate.
15th May, 1953. [7140

BROMSGROVE URBAN DISTRICT COUNCIL.

ERECTION OF 20 HOUSES.

CHARFORD HOUSING ESTATE—SECTION NO. 9.

THE Council invite TENDERS for the erection of 20 houses on Charford Housing Estate, Bromsgrove, Section 9, in one contract as follows:—

7 PAIRS—TYPE "L."
3 PAIRS—TYPE "H."
TOTAL 20 HOUSES.

Drains, gates, fences, retaining walls and paving.

Bills of Quantities and Form of Tender will be sent to Builders of Contractors making a written application to the Engineer and Surveyor, Council House, Bromsgrove.

The applications should be accompanied by a deposit of £3 3s, which sum will be returned upon the receipt of a bona fide tender, together with all the documents.

The last date for the receipt of tenders is noon on Wednesday, 8th July, 1953, and the tenders are to be addressed to the undersigned in plain sealed envelopes endorsed "Charford Housing Estate, No. 9."

Plans and Specification may be inspected at the offices of the Engineer and Surveyor, Council House, Bromsgrove, or the Quantity Surveyor, R. H. Crump, Esq., Redditch Road, Holloway, Alvechurch, Worcestershire, during the usual office hours.

The Council do not bind themselves to accept the lowest or any tender, and any acceptance is subject to the approval of the Ministry of Housing and Local Government.

F. A. JESSOP,
Clerk to the Council.

Council House,
Bromsgrove. [7149

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PRESS DAY Monday. Remittances payable to Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.

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ARCHITECTURAL APPOINTMENTS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order 1952.

ARCHITECTURAL assistant required, R.I.B.A. Intermediate standard, preferably with office experience and capable of preparing detail drawings under qualified supervision; chance to develop contemporary design ability. Write stating age, experience and salary required.—Box 7668. [7137

ARCHITECTURAL assistant required in small private office, W.1 district, to prepare surveys, sketch plans, working drawings and undertake site supervision; varied practice.—Please write, stating experience and salary required, to R. P. Sharman, A.R.I.B.A., 55, Queen Anne St., Cavendish Sq., W.1. [7134

WANTED, qualified Assistant, R.I.B.A. Finals, age 25-30, for Bournemouth office; must carry out contracts from sketches to final accounts.—Reply, stating salary required and when free, Box 7723. [7146

ARCHITECTURAL Assistant required by City architects. Intermediate R.I.B.A. standard with office experience; salary according to age and experience.—Apply Box 7724. [7148

IMPERIAL CHEMICAL INDUSTRIES, Ltd., General Chemicals Division, require an assistant architect in their chief engineer's department, Runcorn, applicants should have had good experience in design and the preparation of working drawings; other facts being equal, preference will be given to those who have passed the final examination of the R.I.B.A.; salary dependent on age and experience.—Apply in writing to Staff Manager, Imperial Chemical Industries, Ltd., General Chemicals Division, Cunard Building, Liverpool, 3. [7136

SITUATIONS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order 1952.

POSITION vacant.—An old established London building contracting company requires a senior executive; must have extensive knowledge and experience of the building industry, and considerable administrative ability; the position offers scope for one with a flair for organisation; age preferably not over 45; salary in the neighbourhood of £2,000 p.a.—Apply Box 7529. [7128

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PROGRESSIVE post required in London by young Associate, married, five years' school training, experience in small practices engaged with general work and private estate development.—Box 7667. [7135

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SERVICES OFFERED—contd.

ACCURATE architectural models of all types supplied. It pays to get my quotation!—Richards, Sunnybank, Barnham, Bognor Regis. [7092

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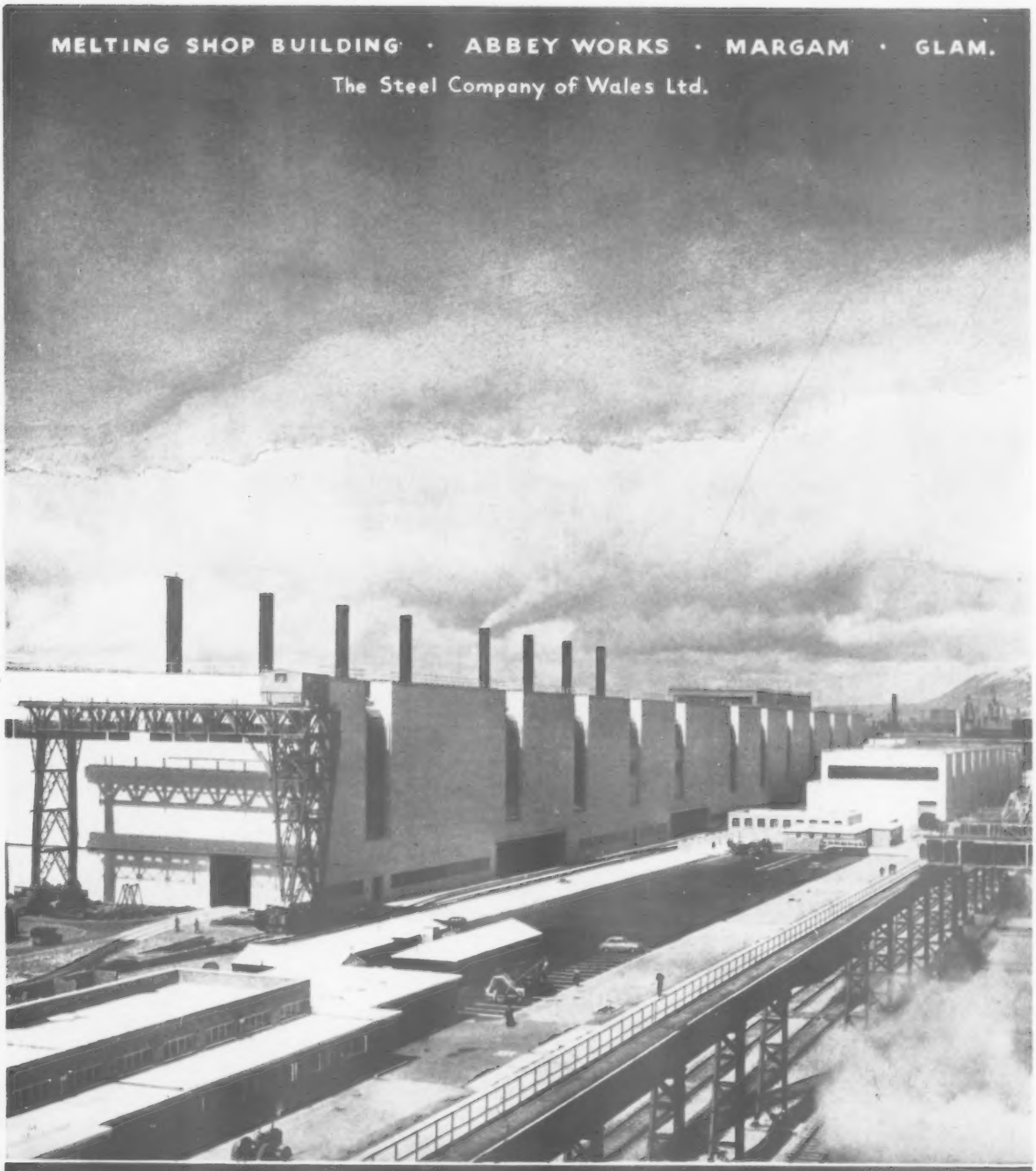

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